MILLERS FALLS

SINCE





Hand Tools Portable Electric Tools Hack Saws



MILLERS FALLS COMPANY

GREENFIELD, MASSACHUSETTS, U. S. A.

CHICAGO OFFICE 100 5. Jofferson Street NEW YORK OFFICE 28 Warren Street

Coble Address: "Millerfall" Greenfield Codes Acme and Bentley's



IMPORTANT INFORMATION

CATALOG NO. 49

Effective with this new catalog all of the fine tools in our extensive lines which have heretofore borne the famous Goodell-Pratt name will be branded and labeled Millers Falls. This catalog lists all the active items in our lines. All old catalogs should be destroyed.

NEW TOOLS

See Pages 168 -176 for the interesting new tools announced since the first printing of this catalog.

Many interesting and popular new tools have been added since the publication of our last catalog. These new items are clearly indicated by an appropriate notation in the margin of the pages on which they appear.

SPECIFICATIONS

Control of certain materials by the government under the National Emergency Decree will make it mandatory that some of the specifications appearing in this catalog be changed.

Our standard specifications for each tool we manufacture are used in this catalog. Owing to difficulties that still exist in securing certain classes and finishes of materials it may be several months, in some few instances, before these specifications are fully met.

PRICES

Current prices on Millers Falls tools can be procured from your Hardware Dealer.

The list prices shown in this catalog are those in effect at time of publication and are subject to change without notice. All orders are accepted with the understanding that they will be billed at prices prevailing at the time shipment is made.

WARRANTY

Every tool stamped with the Millers Falls name is warranted free from imperfections and defects in material or workmanship. Should such defects appear, we will, at our option, cheerfully repair or replace the tool without charge. Under no circumstances, however, can we assume the responsibility for breakage where flaws do not appear, nor will we replace tools which have suffered from abusive treatment or have been stamped with the owner's name, changed, or otherwise experimented upon. No dealer is authorized to make replacements for us. Articles claimed defective must be returned, charges paid, for inspection, direct to the factory at Greenfield and not to any of our branch offices.

SHIPPING INSTRUCTIONS

In ordering, please be sure to give full and explicit directions for shipment and they will be carefully followed. If shipping instructions are not given, we will use our own best judgment in forwarding ship-



IMPORTANT INFORMATION

ments. All goods are at the risk of the purchaser after delivery in good order to the forwarders. We cannot hold ourselves responsible for articles lost in transit but will use our best efforts in the interest of the purchaser to locate the goods or have proper restitution made.

SERVICE FROM WAREHOUSE

A warehouse stock is maintained in Chicago for the convenience of our customers. Shipments from this stock are subject to a very reasonable service charge. This charge will be quoted on request.

PARTS AND REPAIRS

Repair parts can be furnished for any tool shown in this catalog. Customers should state clearly just what new parts are wanted, giving the number of the tool and any other data that will help avoid error in filling the order. Owing to the considerable expense of round trip transportation, in addition to repair costs, it is recommended that the owner make his own repairs whenever it is possible. Estimates on repairs and prices of repair parts will be gladly furnished on request.

RETURNED GOODS

The return of goods for credit cannot be accepted without permission from the main office. Shipping instructions should be obtained for any goods to be returned for any reason other than for repair.

TERMS

Invoices are payable at the main office in Greenfield, in New York or Boston funds, net 30 days from date rendered or 2 per cent discount payment in ten days.

Shipments are F.O.B. cars Greenfield or Millers Falls, Massachusetts. Freight allowed on one hundred pound shipments of Hack Saw Blades, Electric Tools or Metal Cutting Band Saws. These terms subject to any changes that may become necessary through government regulation.

ELECTROTYPES

The free use of our electrotypes for advertising purposes is extended to all of our customers. Electrotypes of our tools made from fine wood engravings will be supplied in two sizes: the size used in our large catalog and a small size for use in a 21/4-inch column. We cannot attempt to make up any other special sizes.

INVITATION

A most cordial invitation is extended to Jobbers, Distributors and Dealers to visit our factories and get ocquainted with the personnel back of Millers Falls Tools.

MILLERS FALLS COMPANY

October 1949



MILLERS FALLS BENCH PLANES

This fine line of planes has an instant appeal to craftsmen who know the true value of fine quality tools and it typifies the excellent design, workmanship and finish that are built into all Millers Falls Tools. These planes are sturdily built for fine performance. They earn through long, satisfactory service a pride of ownership that is the highest tribute that could be paid to their excellence.

Three noteworthy features that contribute to the fine performance of Millers Falls Planes are the exclusive three-point bearing lever cap, preventing chatter; the precisely fitted cutter cap, and the cutter iron which is made of one solid piece of carefully hardened and tempered tool steel nicely polished.

The bottoms are made of seasoned castings, reinforced for added strength, milled and nicely polished on the bottom and two sides. The sensitive, easily operated side and depth adjustments, rigidly seated frogs, self-aligning lever caps and comfortable rosewood knobs and handles all do their part in making this line the last word in planes.

The finish throughout is in perfect keeping with the high standards to which these tools are made.

BENCH PLANE IRONS



Double Iron



Single Iron

The heart of any plane is the cutter iron. Without a fine iron a plane cannot produce the smooth, easy cuts that are expected of an efficient, high quality tool.

Millers Falls Irons are made of one solid piece of selected tool steel heat-treated with the utmost care to the point where they will give excellent results in hardwood and still are not too hard to be honed back into condition readily when dulled. Being of one solid piece the iron is longer lived; therefore it can be sharpened over and over again.

The irons listed below used in Millers Falls Bench Planes can also be used in planes of several other makes.

Fitting Flores				e Irons		e frons
Number		Width	Number	Price each	Number	Price end
8-8C-11	1	134"	1168	\$1.30	168	\$0.90
19-9C-14-14C 814-900		2"	2200	1.40	200	1.00
15-15C		2 1/4"	2228	1.60	228	1.20
10-10C-18-18C 22-22C		2 %"	2238	1.80	238	1.30
24-24C		2 %"	2258	1.80	258	1.30

Single Irons packed six in a box. Double Irons packed three in a box.

PLANES



MILLERS FALLS
TOOLS



SMOOTH PLANES

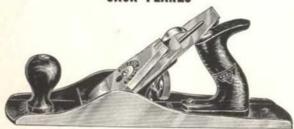


Quick, easy, depth and side adjustments of irons. Irons one solid piece of high quality tool steel nicely ground and polished. Bottoms and sides milled and well polished. Inside of bottoms finished in glossy black enamel. Adjustable frogs finished in red enamel. Selected rosewood knobs and handles. Lever caps polished, nickeled and buffed.

CHAMA	PLE	DOT	TOLL
SMOOT		BO!	IOM.

	Length	Width Iron	Weight	Code	Price sed
No. 8	8"	1 34"	3 1/8 lbs.	EATER	\$6.60
No. 9	9"	2"	3 1/2 lbs.	EAMES	6.90
No. 10	10"	2 %"	4 % lbs.	EAMAT	8.40
		CORRUGATED	BOTTOM		
No. 8C	8"	1 34"	3 lbs.	EAWE.	6.80
No. 9C	9"	2"	3 % lbs.	EAMOG	7.10
No. 10C	10"	2 % "	4 1/2 lbs.	EAWOR	8.70

JACK PLANES



Quick, easy, depth and side adjustments of irons. Irons one solid piece of high quality tool steel nicely ground and polished. Bottoms and sides milled and well polished. Inside of bottoms finished in glossy black enamel. Adjustable frogs finished in red enamel. Selected rosewood knobs and handles. Lever caps polished, nickeled and buffed.

SMOOTH BOTTOM

No. 11 No. 14 No. 15	11 ½" 14" 15"	Width Iron 1 34" 2" 2 1/4"	Weight 3 ½ lbs. 4 ½ lbs. 5 ¾ lbs.	Code EAWIT EAWUG EARLS	\$7.20 7.50 10.50
		CORRUGATED	BOTTOM		
No. 14C No. 15C	14"	2"	4 3/4 lbs. 5 3/6 lbs.	EAVAD	7,70

All the above planes packed one in a box



FORE PLANES



Quick, easy, depth and side adjustments of irons. Irons one solid piece of high quality tool steel nicely ground and polished. Bottoms and sides milled and well polished. Inside of bottoms finished in glossy black enamel. Adjustable frogs finished in red enamel. Selected rosewood knobs and handles. Lever caps polished, nickeled and buffed.

SMOOTH BOTTOM

	Length	Width fron	Weight	Code	Price each
No. 18	18"	2 3/6"	6 % lbs.	EABON	\$11.00
		CORRUGATE	D BOTTOM		
No. 18C	18"	234*	6 % lbs.	EACOR	11.30

JOINTER PLANES



Quick, easy, depth and side adjustment of irons. Irons one solid piece of high quality tool steel nicely ground and polished. Bottoms and sides milled and well polished. Inside of bottoms finished in glossy black enamel. Adjustable frogs finished in red enamel. Selected rosewood knobs and handles. Lever caps polished, nickeled and buffed.

SMOOTH BOTTOM

	Length	Width Iron	Weight	Code	Price each
No. 22 No. 24	22° 24°	2 35"	7 ½ lbs. 9 ¼ lbs.	EACUL	\$13.40 15.00
		CORRUGATE	D BOTTOM		

No. 22C 13.70 22" 2 3/6" 7 3/1 lbs. EAFER No. 24C 24" 15.40 2 %" lbs. EAGOL

All the above planes packed one in a box



ADJUSTABLE THROAT BLOCK PLANES

Designed and used primarily for working cross grain surfaces. Block Planes are invaluable for many light operations cutting with the grain. They are short, light in weight and are easily controlled with one hand. The models below are equipped with adjustable throats for roughing or finish cuts in any kind of wood.

Two cutter iron angles are available — Standard 20° for soft woods and Low 12° for hard woods



Standard Angle. Adjustable Throat

Side and depth adjustments of irons. Irons one solid piece of high quality tool steel. Bottoms and sides nicely polished. Inside of bottoms and lever caps black enameled. Throat adjusting levers and knurled lock nuts nickel plated.

No. 16	6"	1 %"	1 ½ lbs.	EBENS	\$3.80
No. 17	7"	1 %"	1 ¾ lbs.	EBORG	4.00



Standard Angle. Adjustable Throat

Same as Nos. 16 and 17 above but with a polished, nickeled and buffed cap with a knuckle joint lever clamp. Irons one solid piece of fine tool steel.

	Length	Width Iron	Weight	Code	Price work
No. 36	6"	1 5%"	1 ½ lbs.	EBRAG	\$4.50
No. 37	7"	13%"	1 3% lbs.	EBREL	4.70



Low Angle. Adjustable Throat

Screw depth adjustment of irons. Irons fine tool steel set at 12° angle. Bottoms and sides nicely polished. Inside of bottoms and lever caps black enameled. Throat adjusting levers and lock nuts nickel plated.

TANKS THAT	Length	Width Iron	Weight	Code	Price each
No. 56 No. 57	6"	1 36"	1 1/4 lbs.	ECROW	\$3.80
1401.01	,	1.9%	1 3/a lbs.	ECTOL	4.00

All the above planes packed one in a box



NOS. 45 and 75 BLOCK PLANES



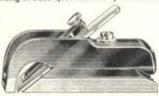
Standard Angle. Rosewood Knobs

Screw depth adjustment of tool steel irons. Cam lock lever caps. Rosewood knobs. Bottoms and sides nicely polished. Inside bottoms and lever caps black enameled.

No. 45 No. 75	5 1/2" 7"	Width Iron 1 3/4" 1 5/4"	1 1/2 lbs. 1 1/2 lbs.	EDROX EDRAL	\$2.70

BULL NOSED RABBET PLANE

Especially well adapted for working in close quarters and up into corners. It has an adjustable throat.



Nicely polished bottom and sides. Body and lever cap black enameled. Solid tool steel cutter iron. Nickel plated damp and throat adjusting screws.

No. 4 Length Width Iron Weight Code Price each 1° ½ lb. EFACE \$1.70

ADJUSTABLE BLOCK AND RABBET PLANE

This unique plane has its solid tool steel cutter iron ground at an angle which gives an easy skew or shave cut. As illustrated it is used as a block plane. The right-hand side, however, is removable converting it into a rabbet plane.



Standard Angle. Screw Depth Adjustment

Screw depth adjustment of solid tool steel cutter iron. Rosewood knob handle. Bottom and sides nicely polished with inside and lever cap black enameled. Cap lever screws and side lock screws nickel plated.

No. 07

Length 7"

Width Iron

Weight 1 ½ lbs.

ESCOW

\$4.60

All of the above planes packed one in a box



ADJUSTABLE BLOCK PLANES





Standard Angle. All Steel Construction

The unbreakable all steel construction of this fine little plane makes it particularly suited for use in manual training shops as well as for skilled craftsmen. Screw depth adjustment of tool steel iron. Bottom and sides nicely polished. Drop forged frog. Steel knob, screw lever cap and adjusting nut nickel plated.

Length No. 206 61/4"

Width Iron 156"

Weight 1 lb.

Code **EDFLO** Frice each \$4.00



Standard Angle. Lever Depth Adjustment

Lever depth adjustment of solid tool steel cutter iron. Screw operating cap clamp nickel plated. Bottom nicely polished with sides and inside and cap black enameled.

No. 55

Length 51/2" Width from 134"

Weight % lb.

Code **EDELS** Price each \$1,90



Standard Angle. Lever Depth Adjustment

Lever depth adjustment of solid tool steel cutter iron. Bottom and sides nicely polished with inside black enamel. Black enameled cap clamp operated by nickel plated screw. Rosewood knob handle.

No. 97

Width Iron Length 15%"

Weight 1 3/4 lbs.

Code **EDANS** Price with \$2.60

All of the above planes packed one in a box



NON-ADJUSTABLE BLOCK PLANES

These short length, inexpensive planes will be found particularly useful in pattern work and model building or where the work is in dose quarters. They are light in weight and fit into the hand snugly.



No. 33



No. 5 Standard Angle

Bottoms nicely polished. Sides and clamps black enameled. Screws operating cap clamps nickel plated. Solid tool steel cutter irons.

Price wach Width Iron Weight Code 1" No. 33 31/2" 3/4 lb. EDOOL \$0.90 No. 5 51/2" 13%" 1/2 lb. **EDWAD** 1.50



Standard Angle

Bottom and sides polished. Lever cap and hardwood knob handle black enameled. Solid tool steel autter iron. Screws operating cap clamp nickel plated.

No. 700

Length 7" Width Iron 1 % " Weight 1 3/8 lbs.

Code ETCAB \$2.00



Standard Angle

Bottom and sides nicely polished with inside and lever cap black enameled, Rosewood knob handle. Solid tool steel cutter iron. Nickel plated clamp screw.

No. 87

Length 7" Width Iron

Weight 1 1/4 lbs. Code

\$2.30

All of the above planes packed one in a box



DOUBLE END BLOCK PLANE

This combination plane has two throats and two cutter seats. As illustrated it is an ordinary block plane but when the cutter iron and lever cap are set up in the seat at the other end it becomes a bull-nosed rabbet plane.



Standard Angle

Bottom and sides nicely polished with inside and lever cap black enameled. Rosewood knob handle, Solid tool steel cutter iron. Nickel plated clamp screw.

M Code Price nock
os. EDFEN \$3.30

RABBET AND FILLISTER PLANE



This Millers Falls Plane has every desirable feature in a rabbet plane built into it. It is equipped with two cutter seats — a rear seat for regular work with a lever adjustment of the blade for depth, and a forward seat for bull-nosed work.

The fence is adjustable on the steel arm. The steel arm and the fence can be used on either side of the plane as the work requires. When the arm and fence are entirely removed, the plane can be used for a wide variety of uses. A three-point spur and a depth gauge are also part of the equipment. The depth gauge can be removed entirely when desired.

Body of plane nicely finished in black enamel. Bottom and both sides accurately ground. Trimmings and small steel parts nickel plated.

Width Iron

81/2" 115" Packed one in a box

No. 85 Robbet

Weight 3 lbs.

EDMAN

Price sod \$5,40



ROUTER PLANES

Router Planes are designed to level off and smooth the bottoms of grooves or slots parallel to the working surface. Two screw holes are provided in the body so that wood bottoms can be attached for increasing the bottom area allowing large areas to be worked, or fences can be attached for following straight or irregular edges.

NO. 77 CLOSED THROAT ROUTER



Three cutter irons, "4" and "2" wide and a "/2" pointed smoother, are provided. Depth of cut is controlled by a screw adjustment. Two seats are provided for the cutters, front for regular work and rear for bull-nosed work. A fence which can be attached to the bottom for following straight or curved edges is regular equipment.

Battom nicely polished. Mahogany lacquered hardwood handles. Frame nickel plated.

No. 77

1/4", 1/2", 1/2" Point Packed one in a box

Weight 2 1/4 lbs.

FFRAD

\$5.30

NO. 67 OPEN THROAT ROUTER



Three cutter irons, ¼" and ½" wide and a ½" pointed smoother, are provided. Depth of cut is controlled by a screw adjustment. Two seats are provided for the cutters, front for regular work and rear for bull-nosed work. Throat can be closed for narrow work by installing attachment supplied. A fence which can be attached to the bottom for following straight or curved edges is regular equipment. Bottom nicely polished. Mahogany lacquered hardwood handles. Frame nickel plated.

No. 67

14", 1/2", 1/2" Point Packed one in a box

2 1/4 lbs.

EFRUE

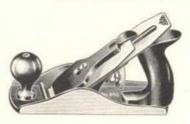
\$6.50



BENCH PLANES

This Smooth Plane and Jack Plane are good tools, capable of first class performance and are the equal of most standard planes. They do not embody all of the features of the preceding Millers Falls Plane and the overall finish is not so high which permits their being offered at a lower price.

SMOOTH PLANE



Depth and side adjustment of iron. Cutters one solid piece of tool steel. Bottom and sides polished Inside of bottom, lever cap, and frog black enameled. Knob and handle black enameled hardwood Furnished with smooth bottom only.

No. 900

ength 9" Width Iron 2" Weight 4 lbs. Code ETDES

\$3.4

Parked one in a box

JACK PLANE



Depth and side adjustment of irons. Cutters one solid piece of tool steel. Bottom and sides polished Inside of bottom, lever cap, and frog black enameled. Knob and handle black enameled hard wood. Furnished with smooth bottom only.

No. 814 14"

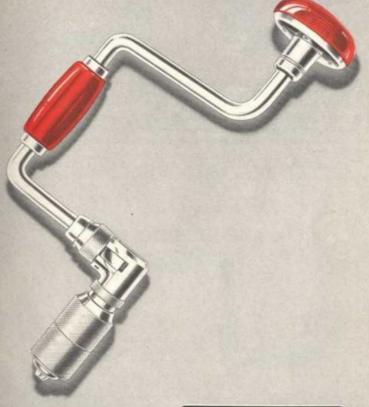
Width Iron

Weight 43½ lbs.

ETGOK

\$4.3

BIT BRACES



MILLERS FALLS
TOOLS



NO. 5010 PARSONS DE LUXE BRACE



Chrome Plated

This beautiful tool, illustrated in color on the preceding page, was designed several years ago by W. J. Parsons, the dean of our designing and engineering staff, in commemoration of his fiftieth anniversary with the Millers Falls Company.

The chuck is full ball bearing with two machined steel jaws that hold ½ to ½ inch round shank, No. 1 Morse Taper and square bit shank drills and reamers. The full boxed ratchet is controlled by a ring shift. Sweep handle runs on bronze bushings as does the head. Head is also equipped with a ball thrust bearing.

The steel clad head and sweep handle are made of a glossy, transparent red Permaloid, a plastic more durable than wood. All exposed metal parts highly polished and finished in brilliant chrome plate.

 Sweep
 Weight
 Code
 Price eof

 No. 5010
 10 °
 3 ½ lbs.
 ANABO
 \$11.00

Packed one in a box

NOS. 770-772 RATCHET BRACES



A sturdy, quality brace. Ball bearing at every possible point, every constructional detail refined and the entire tool beautifully finished. Equipped with Lion ball bearing druck to hold regular square shanks, No. 1 Morse Taper and round shanks from ½ to ½ inch in diameter. Boxed rathet with ring shift. Full steel clad, ball bearing head. Head and handle finely finished tropical hardwood Handle has metal inserted rings. All exposed metal parts heavily nickeled and highly buffed.

Sweep Weight Code Price oot No. 770 14" \$9.20 3 1/4 lbs. ABACU 12" No. 771 31/2 lbs. 8.70 ABAFT 10" No. 772 3 3/4 lbs. 8 40 ABAND

Pocked two in a box



NOS. 730-733 RATCHET BRACES



A fine quality brace, popularly known for years as the "Holdall," having been one of the first to be equipped with the universal type or "Master" chuck holding square, No. 1 Morse Taper and plain round shanks from ½ to ½ inch in diameter.

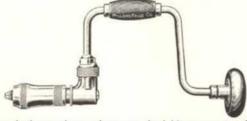
Boxed ratchet mechanism with ring shift. Steel clad, ball bearing head. Handle has inserted metal rings. Head and handle of finely finished tropical hardwood.

All exposed metal parts nicely polished, nickel plated and buffed.

	Sweep	Weight	Code	Price each
No. 730	14"	3 1/2 lbs.	ABBEY	\$8.00
No. 731	12*	3 1/4 lbs.	ABBOT	7.40
No. 732	10"	3 1/4 lbs.	ABDIC	7.20
No. 733	8 *	2 34 lbs.	ABDOK	7.20

Packed two in a box

NOS. 31-33 RATCHET BRACES



This brace meeting every boring requirement for square shank bits represents a fine value and has probably enjoyed the greatest sale of any quality brace ever produced.

Equipped with Barber chuck with self-opening, forged steel alligator jaws. Steel clad, ball bearing head. Handle has inserted metal rings. Boxed ratchet with ring shift. Head and handle finely finished tropical hardwood.

All exposed metal parts nicely polished, nickel plated and buffed.

	Sweep	Weight	Code	Price each
No. 31	12"	3 1/4 lbs.	ABSEN	\$7.20
No. 32	10"	2 % lbs.	ABSOL	7.00
No. 33	8"	2 1/2 lbs.	ABSIK	7.00

Packed two in a box



NOS. 1321-1324 RATCHET BRACES



Similar to Nos. 31 to 33, but with mahogany finished hardwood heads and handles.

Boxed ratchet mechanism, with ring shift. Barber chuck with self-opening, forged steel alligator jaws. Ball bearing, steel clad head. Handle has inserted metal rings.

All exposed metal parts polished, nickel plated and buffed.

12"

No. 1712

No. 1321 No. 1322	12" 10"	Weight 3 lbs. 2-34 lbs.	ACRIM ACROB ACTIV	\$6.30 6.00 6.00
No. 1323 No. 1324	8″ 6″	2 ½ lbs. 2 ¼ lbs.	ACTOR	6.00

NOS. 1708-1712 RATCHET BRACES



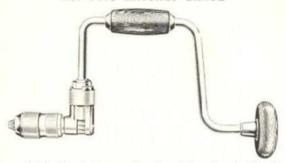
Well built, serviceable braces that can be offered at a moderate price. They are equipped with Barber chuck with alligator jaws and semi-boxed steel ratchet. Knurled shifter ring controls ratchet mechanism. Steel clad, ball bearing head and sweep handles made of hardwood, nicely mahagany lacquered. All exposed metal parts nickel plated.

2 ½ lbs. Packed six in a box 4.35

ALROX



NO. 1410 RATCHET BRACE



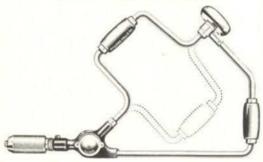
A serviceable brace that is offered at a popular price. It is equipped with a Barber chuck with alligator jaws and a semi-boxed ratchet mechanism operated by a knurled ring shift. Handles mahagany stained hardwood. All exposed metal parts polished.

No. 1410

Sweep 10" Weight 2 lbs Code AGLOR \$2.40

Packed one half dazen in a box

NO. 502 CORNER BRACE



A great time and labor saver on jobs where there are a lot of holes to be bored in corners, against walls and beams and similar locations. Far more pressure can be put on the bit and more power delivered to the chuck than with a ratchet brace on the same work.

Master chuck holds square, No. 1 Morse Taper and round shanks from ½ to ½ inch in diameter. Machine-cut, case-hardened steel gears, fully enclosed. Ball thrust bearing at base of chuck. Ball bearing head. Handles have inserted metal rings. Frame black enameled. Head and handles mahagany finished hardwood. Length, 17 inches.

All exposed metal parts, except frame, polished, nickel plated and buffed.

No. 502

5-eep

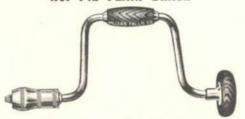
4 % lbs.

Code AGAPE \$12.00

Packed two in a box



NO. 142 PLAIN BRACE



On many classes of work a ratchet mechanism on a brace is unnecessary and a plain or sleeve brace fills the requirements. This is a low-priced brace with inexpensive finish. Barber chuck with alligate jaws. Head is screwed securely to the quill. Head and handle mahogany stained hardwood. Exposes metal parts polished.

No. 142

No. 4

Weight Sweep 10" 1 34 lbs. Packed six in a box

Code AFILI

Code

CAGES

Code

CAGNE

Price esc \$2.00

NO. 4 RATCHET AUGER HANDLE



A heavy duty tool that can be operated by two men when desirable. It has a powerful ratchet mechanism, controlled by a small lever. It can be quickly changed from right- to left-hand ratchet or can be positively locked.

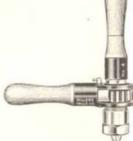
The handle shown at the right, the outer portion of which swivels freely, can be unscrewed from its normal position and screwed into the nex nut at the top of the frame to form a steady handle for use in comers or against walls or other obstructions.

Length

15"

Chuck holds practically all sizes of bit and auger shanks. Metal frame and handle ferrule blace enameled. All other exposed metal parts nicely nickel plated.

> 3 lbs. Packed one in a box



NO. 2 AUGER HANDLE



A stout wood handle holding all sizes of bits and all but the largest sizes of ship auger shanks. Auge are held by two 3-inch steel clamps tightened by means of two wing nuts. Handle straight graines selected ash.

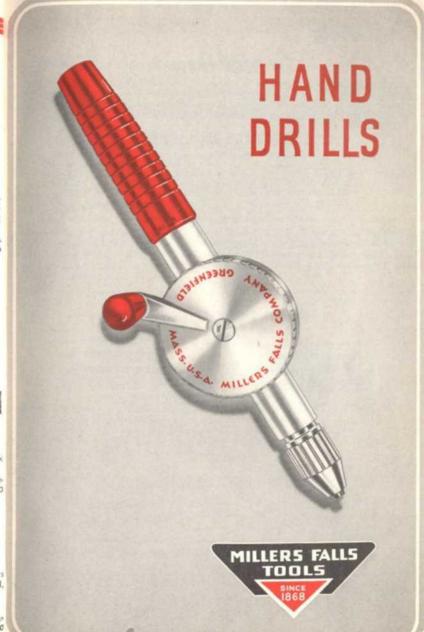
Capacity - Regular Bit Shanks up to 2 inches; Ship Auger Shanks up to 2 inches.

Weight Length 17." No. 2

11/4 lbs. Packed six in a box Price ed \$1.5

Price an

\$6.2



ROSE TOOLS INC

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DRILL POINTS

The straight fluted drill points shown below are for use in automatic or hand drills according to the type of shank with which they are fitted. They are made of a fine grade of tool steel, carefully hardened and tempered and well sharpened. They drill nice, clean holes in hard and soft wood soft metals, plaster, bone, wallboard and many other similar materials.

NEW STYLE DRILL POINTS

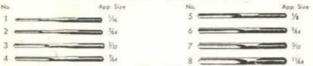
No.	App Size	No.	App Size
1 101		5 101	- 1/s
2 [[]		6 10	364
3		7 [- Yu
4 511		8 (11/4

For Millers Falls and some other Automatic Drills

The shanks of these drill points have a slabbed base that seats very positively in the bottom of the chuck and a recess for a locking mechanism that prevents them from pulling out. They are made of fine tool steel properly hardened and carefully sharpened. Bright finish. Made in eight sizes of indicated above.

	Length	Code		Price
No. 401	2"	DETOR	Per Dozen	\$1.50
No. 401	2 "	DETOT	Set of 8	1.10

FLUTED SHANK DRILL POINTS



For use in Millers Falls and Goodell-Pratt Automatic Drills

These drill points have fluted shanks for use in the two-jawed chucks of automatic drills. They are made of a fine grade of tool steel properly hardened and carefully sharpened. Made in eight sizes as indicated above.

	Length	Code		Fron
No. 402	2 "	ZOTOZ	Per Dozen	\$1.50
No. 402	2"	ZOTPA	Set of 8	1.10

ROUND SHANK DRILL POINTS

No.	A	pp. Size	No	App Size
1		Ma	5	 → ½
2	$\overline{}$	364	6	 ⇒ %4
3		3/2	7	 3/22
4		360	8	 11/4

For use in Hand Drill Churks

These points are identical to those above but with plain round shanks for use in any ¼-inch threejawed chuck. Made in eight sizes as indicated above.

	Length	Code		Price
No. 403	2"	ZOTUB	Per Dozen	\$0.75
No. 403	2"	ZOTVA	Set of 8	.55

Packed one dozen or one set in a metal screw capped plantic vial



NO. 185A AUTOMATIC DRILL



A world-famous drill that has been made even finer by the addition of a new style chuck

The front portion of the tool is made of hollow brass tubes, on one of which a carefully machined spiral is cut. This runs through a spiral cut in the center nut, which is made of a very hard grade of bronze.

The finely knurled handle is of the magazine type, having individual compartments for the eight different size drill points. Each one of these compartments is numbered and below the number is a hole or gauge showing the size of hole drilled by the point in that compartment. Drill points are removed or returned by turning the hole in the rotating cap opposite the proper compartment and tipping out the point. Only one compartment opens at a time.

The chuck seats the drill points very positively and locks them securely so that they cannot be pulled out until the chuck shell is unscrewed.

One set of eight, No. 401 New Style Drill Points, 1/4 to 11/4 inch in diameter, regular equipment.

No. 185A 10" Weight Code Price each 10" ½ lb. YEKIJ \$4.20

NO. 188A AUTOMATIC DRILL



This tool is built for the home and provides a highly efficient drill at a very reasonable price. Any man, woman, or child can use it to bore the many holes needed from time to time; for installing the many modern fixtures that go into every room in the house, and for innumerable other uses.

It drills eight different size holes quickly and with surprising ease in hard and soft wood, soft metals, wallboard, plaster, etc. The eight drill points are contained in the numbered compartments in the magazine handle. They are safely locked in until wanted.

To remove the desired size drill release the cap lock by slipping down the lock button, turn the hole in the cap opposite the proper drill compartment and tip out the drill.

Insert the drill selected in the four-jawed chuck, tighten the chuck nut and the tool is ready to use. Place the drill point where the hole is wanted and simply push down a few times, allowing the handle to spring back after each stroke, and there is a good clean hole.

The handle is jet black, molded bakelite with a polished aluminum band just below the rotating cap. The exposed metal parts are beautifully polished and nickel plated. The spiral driving mechanism is very well made and is practically indestructible with proper lubrication.

One set of eight, No. 402 Fluted Shank Drill Points, 1/6 to 11/64 inch in diameter, regular equipment.

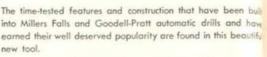
No. 188A 936" 6 ozs. Y

Code YEKNA \$3.00





NO. 100 AUTOMATIC DRILL



. Its uses are unlimited. It is an essential tool for carpenters, cabinet makers, model and pattern makers, electricians, home workshop enthusiasts and home owners. It's the ideal tool for drilling lead holes for screws, nails, hooks, etc.

The barrel of the magazine handle is made of unbreakable red plastic and holds eight No. 402 fluted shank drill point $1\%_6$, $3\%_4$, $3\%_2$, $3\%_4$, $3\%_2$ and $1\%_4$ of an inch in diameter. The number and diameter of the point in any compartment is indexed on the ring above the barrel. The point wanted for use is obtained by pulling down the lock and turning the barrel until the proper number is directly below the hole in the cap. Tip up the drill and the point slips out.

The chuck holds the drill points securely when the chuck shell is screwed tight.

All exposed metal parts are either nickel plated and buffed or highly polished aluminum.

No. 100 91/4" 8 021- YENOR \$3.50

Packed one in a box



*

NO. 1006 DISPLAY UNIT

Complete with six No. 100 Drills

A compact, colorful wood display requiring less than one-half square foot of counter space, that really sells the No. 100 Automatic Drill because to see it is to want it. Nicely lacquered and silk screened in red, black, gray and white.

Width, 11 inches, depth, 41/2 inches, height, 91/2 inches.



Weight 5 lbs. Code YEDAX \$21.00

Packed one unit in a carton



NO. 104 HAND DRILL

Single Speed, Enclosed Gears. Capacity 0 to ¼ inch.

This newest and finest Millers Falls hand drill, of entirely new design, has already demonstrated its fine performance and dependability. Its beauty and smooth operation insure acceptance by craftsmen generally.

The frame and gear cover are die-cast aluminum. The steel spindle runs in an "Oilite" bushing against a thrust bearing. The steel pinion and machine-cut cast drive gear are entirely enclosed.

The handles are made of practically unbreakable, glossy red plastic, far more durable than wood. The screw cap end handle is hollow and is long enough to hold standard twist drills up to 1/4 inch.

The chuck, of new design, has three hardened jaws holding 0 to 1/4 inch drills.

One set of eight, No. 403 Drill Points, 1/6 to 11/64 inch diameter are regular equipment and are packed in the hollow end handle.

Frame and gear cover gray enamel, chuck nickel plated, handles glossy red plastic.

Copacity No. 104 1/4"

1256"

Weight 1 3/s lbs. WYDAM

Code Price each \$5.00

Pocked one in a box

New

NO. 1044 DISPLAY UNIT

Complete with four No. 104 Hand Drills

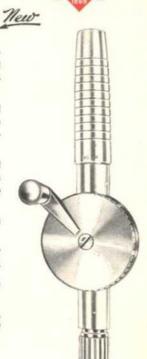
This substantial wood display, lacquered and silk screened in three colors, is supplied entirely free with initial orders for only four No. 104 Hand Drills. Designed for counter use it requires only one-half square foot of space. This display brings this fine new drill to the attention of customers; makes it easy for them to handle and sells on sight.

Width, 11 inches, depth, 5 inches, height, 13 inches.

No. 1044

Weight 10 lbs. WYGET Packed one unit in a carton

\$20.00

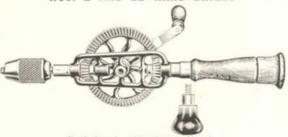


MILLERS FALLS





NOS. 2 AND 2B HAND DRILLS



Single Speed Capacity 0 to 3/2 inch

A strong, serviceable tool built on a sturdy cast frame. Three-jawed chuck with protected spring holds 0 to 1/2 inch round shanks. Gear ratio 4 1/2 to 1. Spindle equipped with ball thrust bearing Two steel pinions, one drive and one idling equalizer.

Frame nicely black enameled. Large gear red enameled with nickeled rim.

Exposed metal parts nickel plated and buffed. Tropical hardwood end handle with screw cap. Eight drill points, 1/16 to 11/16 inch in diameter, regular equipment.

No. 2B is exactly the same as No. 2 but with solid mahogany finished hardwood end handle and without drill points.

No. 2 No. 2B Copocity 3%" 3/4"

Length 1455" 15

Weight 21/2 lbs. 25% lbs.

Code DAGER DAGOT Price real \$6.50 5.50

Pocked one in a box

NO. 308 HAND DRILL





Single Speed

Enclosed Gears

Capacity O to 3/4 inch



Detail showing cast iron drive gear with machine cut teeth solidly anchored to gear cover.

The fine lines and finish of this new 1/2 inch drill are the same as No. 10-1 illustrated in color on page 25.

The frame and gear cover are die-cast aluminum with a gray ename finish baked on. The steel spindle runs in an "Oilite" bushing against a thrust bearing. The steel pinion and the machine-cut cast drive gear are entirely enclosed. Handles are made of practically unbreakable, gloss) red plastic, far more durable than wood. End handle is hollow with screw cap for holding standard twist drills,

The nicely nickeled chuck has three hardened jaws that hold 0 to % inch round shank drills.

No. 308

Copporty 34

Length 13%"

Weight 2 1/2 lbs. Packed one in a box

WYFOT

Price ead \$6.20



NO. 5 HAND DRILL



Single Speed Capacity O to 1/4 inch

This drill is equipped with a wide rim on the large drive gear and can be easily grasped by the thumb and fingers to start small drills on delicate work. This gear is red enameled and the rim nicely polished and nickeled. The frame is black enameled. The drive and equalizing pinions are steel, nickel plated. All gears are machine cut.

The three-jawed chuck which holds 0 to ¼ inch round shank drills is nicely nickel plated. One set of eight, No. 403 Drill Points, ½ to ½ inch in diameter regular equipment; they are packed in the hollow screw cap handle which is made of fine tropical hardwood. Handle ferrules bright nickeled.

No. 5

Copocity 4

Tength 12% Weight 1 1/2 lbs. DANGL

\$6.00

Pocked one in a bax

NO. 77A HAND DRILL



Single Speed Capacity 0 to 1/4 inch

A smooth operating drill that sells for a very moderate price. The frame is a smooth, black enameled die casting. The drive and equalizing pinions are steel, nickel plated. The solid large gear is red enameled. All gears are machine cut.

The nickel plated chuck holds 0 to 1/4 inch round shank drills. Handles mahagany finished hardwood.

No. 77A

Capacity

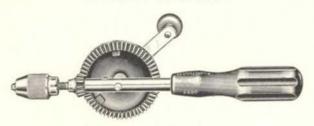
Length

Weight 1 % lbs: DETIG

\$3.00



NO. 2500B HAND DRILL



Single Speed Capacity 0 to 1/4 inch

A popularly priced solid steel frame drill with a lot of dependable service built into it. Large gear is cast and finished in red enamel; the pinion is steel. Both gears have machine cut teeth. The three jawed chuck holds 0 to ¼ inch round shank drills. Crank and end handles mahogany finished hardwood.

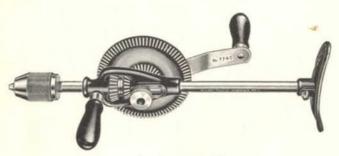
No. 2500B

Sopocity 1/4 * tength 10% " Weight 1 1/4 lbs.

Code DASUR \$ 2.00

Packed one in a box

NO. 7740 BREAST DRILL



Two-Speed Capacity 0 to 1/2 inch

A sturdy, dependable drill offered at a very moderate price. The black enameled frame and breast plate are fastened together by a solid polished steel shank. The red enameled large gear can be easily shifted to two positions in the frame—one for high and one for low speed operation. Two separate steel pinions. All gears machine cut. All-steel chuck has three hardened jaws that hold 0 to ½ inch round shank drills. Handles mahogany finished hardwood.

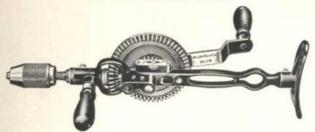
No. 7740

Capacity 1/2" Length 161/2" Weight 4 1/2 lbs. Code

\$5.00



NO. 118 BREAST DRILL



Two-Speed Level Capacity 0 to 1/2 inch

A sturdy, two-speed drill built on a black enameled frame equipped with a well-protected spirit level. Black enameled breastplate. Large gear red enameled with polished, nickeled and buffed edge and rim. Nickeled steel pinion. Gear ratios 3 to 1 and 1 to 1. Nickeled extensible crank. Adjustable ball bearing spindle. Nickeled three-jawed chuck with protected springs holds 0 to ½ inch round shanks. Idler roll to equalize large gear bearing. Side and crank handles mahagany finished hardwood.

All exposed metal parts nickel plated.

No. 118

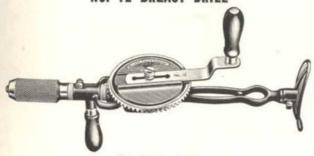
Copocity 1/2"

Length 171/2" Weight 61/2 lbs. Code

\$9.50

Packed one in a box

NO. 12 BREAST DRILL



Two-Speed Level
Capacity 1/6 to 1/2 inch round, Bit and No. 1 M. T. Shanks

Same sterling construction as No. 118 above, but equipped with a Master chuck holding round shank drills, ½ to ½ inch in diameter, bit shanks and No. 1 Morse Taper Shanks.

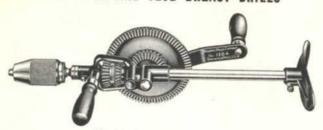
No. 12

Capacity Universal Length 171/2° 6 1/2 lbs.

Code DEBUT \$8.50



NOS. 119A AND 120B BREAST DRILLS



Two-Speed Two Steel Pinions

These fine values in the medium priced field are built on strong black enameled frames. The breastpl is connected to the frame by a solid polished steel shank. Two speeds with ratios of 3 to 1 and 1 to Large gear finished in red enamel. Ball thrust bearing on spindle. Side and crank handles mahogs finished hardwood. All exposed metal parts nicely polished.

No. 119A is equipped with a two-jawed chuck that holds 1/2 to 1/2 inch round and No. 1 Morse Ta

chuck with pro	otected springs hol	ding 0 to ½ inch r	. 1208 is equipped ourld shank drills.	with a Millers Falls	three-jaw
No. 119A No. 120B	Universal	1814 -	5 lbs.	Code YEAWS	Price :

Packed one in a box

CHAIN DRILLS

1655

An auxiliary tool for use with a breast drill or bit brace when extra power is needed, or where pressure cannot be easily applied.

The drill is automatically fed into the work by an adjustable friction feed which is automatically regulated by the resistance the drill encounters. Drill breakage is, therefore, reduced to a minimum. Requires but a moment to adjust the chain. Reverse movement of brace withdraws drill. No intricate parts to get out of order. Hand feed can be used if desired. Four feet of stout chain with each drill. No. 719 illustrated.

	Copacity	Weight	Code	Prior mach
No. 718	Vs to Vs. No. 1 M. T. and Bit Shanks	4 1/2 lbs.	DECUR	\$8.00
Mo. 114 0 to 1/2	0 to ½" Round Shanks	4 1/2 lbs.	DECLP	8.50



LEVELS

MILLERS FALLS
TOOLS
SINCE

ROSE TOOLS INC



NO. 629 LINE LEVEL



A featherweight model with a cat's-eye vial set in a hexagonal aluminum tube. The hooks and guare are so designed that it snaps on to a level line very easily but cannot be jumped off.

Each level packed in a permanent container of transparent celluloid with a screw cap.

No. 629

Length 3 " Weight 1/2 oz.

Code ZABLO \$0.60

Packed six in a box



DIE-CAST ALUMINUM LEVELS



Two level and four plumb vials

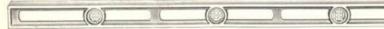
The frames of these fine new levels are made of smooth aluminum die castings. They are designed for maximum strength and rigidity. The two working faces are precisely ground to exact parallelist and nicely finished on four sides and ends. The body is attractively finished in gray and red ename

Excellent visibility and luminosity are provided by the large white vial wells in which the high quality vials are accurately and permanently set. They are well protected by glasses on both side sealed to prevent fogging or breakage.

No. 618 No. 624 No. 628 No. 630 Dimensions 18 × 2 ½ × 1 ″ 24 × 2 ½ × 1 ″ 28 × 2 ½ × 1 ″ 30 × 2 ½ × 1 ″ Weight 1 ½ lbs. 2 ¼ lbs. 2 ½ lbs. 2 ½ lbs. PENAN PENEC PENIT PENOL \$5.5 6.3 6.8 7.2

Packed one in a box

ALUMINUM MASONS' LEVEL



Two level and four plumb vials

This new level is made from an aluminum casting designed for maximum strength and rigidity withoundue weight. Working faces precisely ground to parallelism. Sides polished and the body finished in gray enamel. Large white vial wells protected with sealed glasses. Six high quality vials.

No. 1042

Dimensions 42 x 2 1/4 x 1 1/4" Weight 3 1/4 lbs. PEBYK

\$12.0



WOOD LEVELS

The levels shown on this and the following page are made from the finest straight grain white pine procurable. The billets are thoroughly air seasoned and kiln dried and are filled and finished with care to make them as permanently moisture proof as possible and to maintain their accuracy.

None but high quality, accurately curved vials are used. They are precisely and permanently set and will remain that way unless abused. They are set in white wells for luminosity and protected by glasses on both sides and sealed in with putty.

NOS. 124 AND 130 WOOD LEVELS



Two level and two plumb vials

Made from a plain piece of straight grained white pine, thoroughly seasoned and kiln dried. Filled and finished with weather-proofing red lacquer. White, glass protected and sealed vial wells. Two hand grips on either side.

Dimensions	Weight	Code	Price ead
24 x 21/2 x 11/4"	1 1/2 lbs.	PEFAM	\$3.50
30 x 21/2 x 1 1/4"	1 1/2 lbs.	PEFUX	3.80
	24 x 2 1/2 x 1 1/4"	24 x 2 ½ x 1 ¼" 1 ½ lbs.	24 x 2 ½ x 1 ¼" 1 ½ lbs. PEFAM 30 x 2 ½ x 1 ¼" 1 ½ lbs. PEFUX

Packed one in a box

NOS. 312 AND 330 WOOD LEVELS



One level and one plumb vial

Same fine quality level as above but with only one level and one plumb vial but with a glass protected and sealed top view opening above the level vial. One hand grip on either side.

210	Dimensions	Weight	Code	Price each
No. 312	12 x 21/2 x 11/4"	1 lb.	PEGAM	\$2.50
No. 318	18 x 2½ x 1¼"	1 lb.	PEGIS	2.80
No. 324	24 x 21/2 x 11/4"	1 1/2 lbs.	PEGMY	3.20
No. 328	28 x 21/2 x 11/4"	1 1/2 lbs.	PEGUN	3.40
No. 330	30 x 21/2 x 11/4"	1 1/2 lbs.	PEGYT	3.50



NO. 948 MASONS' LEVEL



Full Brass Binding

Two level and four plumb vials

Made of straight grained, selected white pine thoroughly seasoned and kiln dried. Full brass binding on four edges and brass plates on the ends. Two level and four plumb vials accurately and permonently set in the three oval wells protected and sealed in by glass. Fine red finish makes it as permonently moisture proof and non-fogging as possible. Two hand grips on either side.

No. 948

Dimensions 48 x 2 ½ x 1 ¼* Weight 3 ½ lbs. Code PEJJO \$10.50

Packed one in a box

NO. 848 MASONS' LEVEL



Brass Ends T

Two level and four plumb vials

The same fine levels as above with brass end plates but without the brass binding. Two level and four plumb vials.

No. 848

Dimensions 48 x 2½ x 1¼* Weight 2 1/2 lbs. Code PEKAC \$7.75

Packed one in a box

NO. 448 MASONS' LEVEL



One level and two plumb vials

Similar to the levels above but with only one level and two plumb vials which are set in round glass protected and sealed wells. Red weatherproof finish.

No. 448

48 x 2 ½ x 1 ¼ "

Weight 2 1/2 lbs.

Code PEMAK \$5.00



NO. 590 TORPEDO LEVEL



One level, one 45 and one plumb vial

A beautiful level, unique in the materials used and its wider range of usefulness.

The body is moulded, glossy black bakelite, an ideal material for the purpose due to its great strength; impervious to moisture and the fact that it is affected less by temperature changes than either wood or metal.

The top plate is a heavy piece of polished "nickeloid" which sets flush with the body and gives ample protection to the level glass.

Two plumb, one 45° and one 90°, and one level vial are provided, all of the cat's-eye type, which affords better visibility in poorly illuminated places.

No. 590

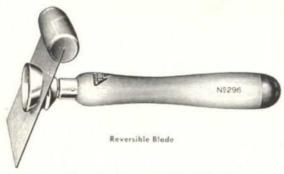
Dimensions 9 x 1 1/4 x 3/4"

Weight 5 021

Code YUOMO

\$1.50

NO. 296 FLOOR SCRAPER



This new scraper has a very quick, positive adjustment of the blade. It is equipped with a practical ball joint that permits setting the blade at a wide range of angles and pitches by simply loosening and tightening the handle.

The blade, which is reversible so all four edges can be used, is made of finest quality tool steel, 3 x 4½ inches, hardened and tempered to hold the ideal scraping edge.

A large, well shaped blade handle is provided to which ample pressure can be applied without discomfort. Both handles are turned from selected hardwood and have a fine natural lacquer finish with green tips.

No. 296 No. 376 Extra Blades 93%

Weight 34 lb.

YICOM YOCAL

Price each \$1.50 .30

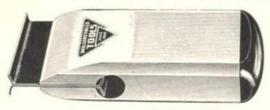
Packed one in a box

Width

3"



NOS. 34 AND 35 WOOD SCRAPERS





Price and

50.7

Four Scraping Edges

The four fine tool steel scraping edges with which these scrapers are equipped make them an our standing scraper value. Two edges are always in position ready for use and two more are available by simply reversing the scraper iron. No other scraper offers such value.

Blades fine tool steel carefully hardened and tempered and then ground and honed to a fin scraping edge.

Handles are of selected hardwood nicely finished in natural lacquer with a green tip.

5"

5"

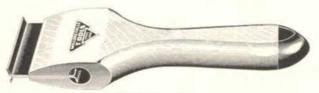
No. 34			21	4"	
No. 35			15	5"	
No. 346	Extra	Blades	for	No.	34
No. 356	Extra	Blades	for	Ala.	35

Width Blode

6 025.	YOOLU
4 023.	YOOMA
	YOONY
	YOOPI

Packed six in a box

NOS. 39 AND 51 WOOD SCRAPERS



Four Scraping Edges

The paint brush type handle with which these scrapers are equipped greatly facilitates any scrapins operation as it provides ample room to apply pressure and a sure comfortable grip in exerting the necessary pull.

They are equipped with new improved blades that give a finer surface with less effort. Each blade has four scraping edges. Two are always ready for use and the other two quickly available by simply reversing the blade in the handle.

The selected hardwood handles are nicely finished in clear lacquer with a green tip.

	Width of Blade	Length	Weight	Code	Price end
No. 39	23/5"	8 34"	6 021.	YADAT	\$0.70
No. 51	1 1/2"	71/2"	4 025.	YAFVA	50
No. 346	Extra Blades for No. 39			YOONY	40
No. 356	Extra Blades for No. 51			YOOPI	.25

Packed six in a box









NO. 29 AUTOMATIC SPIRAL RATCHET SCREW DRIVER

With Automatic, Quick Return

A new, automatic spiral screw driver particularly suited to the requirements of the hobbyist and householder. It is a high grade tool in every detail, sturdily built and nicely finished.

It drives or draws medium size screws smoothly, easily and with surprising rapidity The spiral is just as carefully machined as on our larger sizes. The ratchet mechanism is entirely new and dependable. Action is controlled by simply turning the knurled shifter sleeve right or left as indicated on the stamped band. When set at 0, ratche mechanism is locked.

One bright finish forged steel bit 1/4 inch wide is regular equipment. The chuck and chuck sleeve, shifter sleeve and screw in handle end are nicely nickeled and buffed The handle is made of hardwood with a nice mahogany lacquer finish.

Length Extended with Bit Weight No. 29 10% 1/4 lb. GAKON 5 2.50 Packed one in a box

EXTRA TOOLS



The drills, countersink and slim cabinet type screw driver bit listed below greatly increase the usefulness of the No. 29 screw driver. They are all made with shanks that fit the chuck. No. 329 Set of Points consist of one each 1/16, 1/64 and 1/12 inch diameter.

		Sze	Code	Frice
No. 297	Cabinet Bit	1/2 "	GEBAC	Doz. \$1.7
No. 298	Countersink	76"	GEBAN	Doz. 4.0
No. 329	Set of Points	Via " Na - 312"	GEBED	Set .6
No. 3291	Drill Point	164	GEB)F	Doz. 2.0
No. 3292	Drill Point	564	GEBIR	Doz. 2.0
No. 3293	Drill Point	372	GEBOM	Doz. 2.0

Cabinet Bit and Countersinks packed ¼ doz. in an envelope Drill Points packed 1/2 doz. or one set in a screw top vial



New

NO. 294 DISPLAY UNIT

The attractive display for the No. 29 screw driver and its attachment made of wood, lacquered and silk screened in three colors, is free will only four screw drivers.

No. 294 Display Unit

Weight 3 34 lbs.

Code GIBBO

\$11.0

Complete with 4 No. 29 Screw Drivers and 1 each Nos. 329 Set of Points, 297 Screw Driver Bit, 298 Countersink and Display

Packed one unit in a carta



SPIRAL RATCHET SCREW DRIVERS



Automatically drives or draws screws, acts as a left- or right-hand ratchet or as a rigid screw driver. These actions are all controlled by a simple shifting of the knurled control sleeve and the spiral lock nut.

The spiral is a solid rod of fine quality steel, precisely machined, running in two manganese bronze spiral nuts controlled by hardened tool steel ratchet pawls. Greatly increased life has been secured by nearly doubling the length of the spiral nuts.

Three sizes of special analysis steel blades, individually tested, are furnished as regular equipment.

They are quickly installed by drawing down the shell of the quick acting chuck, inserting the shank and turning it until seated and then releasing the chuck shell.

All exposed metal parts finely polished, nickeled and buffed. Mahogany finished hardwood handle.

	Length Extended with Bit inserted	Length Closed with Bit Inverted	Weight	Code	Price each
No. 67A No. 61A	1256"	9 3/4"	% lb.	GAILY	\$4.30
No. 62A	19 1/2" 25 1/4"	16 36"	1 3/s lbs. 1 3/s lbs.	GALAX	4.90 6.40



With Automatic, Quick Return

Same design and action as above, with the addition of a spring in the handle which automatically returns the handle for the next stroke. Makes one hand operation easy.

	Langth Extended with Bit Inserted	Length Closed with Bit Inserted	Weight	Code	Free each
No. 670A No. 610A	13 1/4"	81/4"	34 lb.	GALEA	\$4.90
	20 1/2"	15"	1 1/2 lbs.	GALIO	5.60
No. 620A	27"	1.8 %	2 3/4 lbs.	GALOP	7.30

Packed one in a box

For extra Phillips and Standard Bits and Drill Attachments see page 46.



PERMALOID HANDLE SCREW DRIVERS

These handsome screw drivers are even more durable and efficient than they are beautiful. In handles are made of transparent bright red Permaloid, an unbreakable, cellulose acetate butyrale a very slow burning material of high dielectric strength ideal for a screw driver in every way. They are ribbed to give a positive grip and the lengths and diameters are ample for efficient, comfortable use

The blades are made of a fine grade of steel, heat-treated their entire length for extreme toughner the bits are cross ground, nicely finished. Each individual blade is torque tested.

NO. 850 PHILLIPS SCREW DRIVER



Licensed under U. S. Patent No. 2,046,840

These drivers are designed to handle the Phillips recessed head screw which is gaining rapidly is popularity. The blades are machined within very close limits to fit the screws perfectly. Blades nicely polished. Unbreakable, transparent red Permaloid handles of high dielectric strength and very slow burning.

	Phillips	Screw Size	Lyngth Blade	Diameter Shark	Weight Box	Code	Frice and
No. 850	No. 1	0 to 4	3"	364"	1/2 lb.	ZENAX	\$0.90
No. 850	No. 2	5 to 9	4"	1/4"	1 1/4 lbs.	ZENFO	1.05
No. 850	No. 3	10 to 16	6"	3/4"	2 lbs.	ZENKA	1.30
No. 850	No. 4	18 to 24	8 "	3/4"	3 1/2 lbs.	ZENRO	1.71

NO. 851 STANDARD SCREW DRIVER



Cross ground, standard type, round shank blades with nickeled and burnished finish. Unbreakable transparent red Permaloid handles of high dielectric strength and very slow burning.

	Length Blade	Diameter Shork	Weight Box	Code	From 6th
No. 851	4"	9/2"	1 ½ lbs.	ZEODY	\$ 9.00
No. 851	6"	5/4"	2 lbs.	ZEOFA	12.6
No. 851	8"	3/6"	3 1/4 lbs.	ZEOHE	15.80
No. 851	10*	36"	4 1/2 lbs.	ZEOIT	17.25
No. 851	12"	36"	5 lbs.	ZEOJA	19.6

NO. 852 HEAVY DUTY SCREW DRIVER



Bits forged on the diagonal from fine quality square stock. Cross ground. Nickeled and burnished Unbreakable, transparent red Permaloid handles of high dielectric strength and very slow burning.

	Length Blade	Size Shark	Weight Box	Code	Price dil
No. 852	4"	1/4 x 1/4"	1 1/4 lbs.	ZEOJT	\$10.6
No. 852	6"	3/4 × 3/4"	2 1/4 lbs.	ZEOKA	13.2
No. 852	8"	3/4 × 3/4"	3 34 lbs.	ZEOKM	16.4
No. 852	10"	36 x 36"	4 1/4 lbs.	ZEOKO	19.66
No. 852	12"	34 × 34"	5 lbs.	ZEOKR	22.4

Packed six in a box



NO. 853 CABINET SCREW DRIVER



Blades hammer-forged from high grade 1/16 inch round stock and tempered entire length. Cross ground, burnished nickel finish. Unbreakable, transparent red Permaloid handles of high dielectric strength and very slow burning.

No. 853 No. 853 No. 853 No. 853	Length Blade 3" 6" 8" 10"	Diometer Blode 3/4" 3/4" 3/4" 3/4"	Weight flox 34 lb. 3/4 lb. 1 lb. 1 1/4 lbs.	ZEOKS ZEOLA ZEOLD ZEOLE	\$ 8.00 8.50 9.00 10.00
--	---------------------------------------	--	---	----------------------------------	----------------------------------

STUBBY SCREW DRIVERS







Sturdy, well made tools for use in close quarters or to carry in the pocket. Blades are 1½ inches long, forged from high grade % inch square stock. The unbreakable, transparent red Permaloid handles are of high dielectric strength and very slow burning.

	Size Blade	Length Blade	Weight Box	Code	Price
No. 854	1/4" Standard	11/2"	% lb.	ZEOMU	\$6.40 doz.
No. 860	No. 1 Phillips	11/2"	1/2 lb.	ZERAB	.80 each
No. 860	No. 2 Phillips	11/2"	3/a lb.	ZEREM	.90 each
No. 860	No. 3 Phillips	13/5"	1 lb.	ZERLO	1.00 each

NO. 855 VEST POCKET SCREW DRIVER



The pencil dip with which this little screw driver is equipped makes it ideal for the vest pocket. The nickeled blade is made of ½ inch round stock, just right size to handle innumerable screws too small for the ordinary driver. The handle is unbreakable, transparent red Permaloid of high dielectric strength and very slow burning.

	Length Blade	Diameter Blade	Weight Box	Code	Price doz.
No. 855	2"	3/6"	1/4 lb.	ZEORA	\$3.00



RATCHET SCREW DRIVERS



The smooth, sturdy ratchet mechanism built into this well-known tool has been thoroughly time tested. It is controlled by turning the knurled shifter sleeve to any one of three positions giving right- or left-hand ratchet or positive action, as desired.

The blade is forged from high quality screw driver steel. Ratchet housing is steel with hardened tool steel ratchet pawls and spring steel springs.

Exposed metal parts polished and nickel plated. Handle mahagany lacquered hardwood.

	Length Blade	Weight Sox	Code	Price worth
No. 63	3"	1 34 lbs.	GANIL	\$1.20
No. 63	4"	1 % lbs.	GAPER	1.30
No. 63	6"	3 1/4 lbs.	GARTH	1.60
No. 63	8 "	3 % lbs.	GARUM	1.80

Packed six in a box



Particularly adapted for radio, electrical and cabinet work where small screws are used. The cabinet type blade can be spun by merely turning the knurled collar at the base of the blade between thumb and fore finger. The same dependable ratchet mechanism is used as in the No. 63 above, gives right-and left-hand ratchet and rigid actions.

Blade nicely polished, other metal parts polished and nickel plated. Handle mahogany lacquered hardwood.

	Length Blade	Weight Box	Code	Price each
No. 55	2"	1 lb.	GATCH	\$1.15
No. 55	3"	1 lb.	GATER	1.20
No. 55	4"	1 1/8 lbs.	GATHA	1.20
No. 55	6"	1 1/4 lbs.	GAUDY	1.30
		W. J. S		

Packed six in a box



Exactly the same mechanism as the heavy sizes of No. 63, with a short, stocky blade and handle for use by gunsmiths, locksmiths, electricians, mechanics and others who need a heavy duty ratchet driver. Three actions: right- and left-hand ratchet and rigid.

Exposed metal parts polished and nickel plated. Handle mahogany lacquered hardwood.

No. 59 Length Blode Length Overall Weight Box Code Price worth

1 1/6" 6 1/4" 2 1/2 ibs. GAWBY \$1.70

Packed six in a box



NO. 676 STEEL HEAD SCREW DRIVER



Torque Tested Blades

An extra fine quality screw driver with a steel head set into the end of the handle and everlastingly locked directly to the shank of the blade. The more hammering on the head, the tighter this lock becomes.

The blades are hammer-forged from a fine quality of tool steel selected for its remarkable taughness when properly heat-treated. The shanks have long, wide wings forged on them that preclude any drance of turning in the handle. The handles, of excellent shape and fluted to give a good grip, are made of selected hardwood with a fine mahagany lacquer finish. The handle is protected by a heavy steel ferrule pinned through the blade.

The blades are highly polished and the steel head and ferrule nickel plated.

	Length Blade	Dismater Blade	Weight Bax	Code	Price dos.
No. 676	3.	3/12"	1 1/4 lbs	ZAJUZ	\$ 6.80
No. 676	4"	\$ 12 °	1.34 ths	ZAJVE	7.40
No. 676	5"	314	2 1/2 lbs	ZAJYO	7.80
No. 676	6	59"	2 % lbs.	ZAKAV	8.00
No. 676	8	36"	4 lbs.	ZAKIX	10.80
No. 676	10	36"	4 1/2 lbs.	ZAKOZ	12.20
No. 676	12"	3/4"	5 lbs.	ZAKUB	14.40

Packed pix in a box

NO. 909 SCREW DRIVER



Torque Tested Blades

The same fine screw driver described above but without the steel head. No finer general purpose screw driver can be made.

Finely polished tool steel blade. Pinned nickel plated ferrule and mahogany lacquered hardwood handle.

Name of the last o	Length Stude	Diameter Blade	Weight Bas	Code	Price daz.
No. 909	2"	7/22 T	34 fb.	ZIASP	\$ 5.50
No. 909	3"	322	3a.lb.	ZIAWS	5.50
No. 909	4"	B-92 "	1 3/s /bs.	ZIAXT	6.00
No. 909	5"	116	1 % lbs.	Z1880	6.20
No. 909	6"	414	2 lbs-	ZIBIZ	6.50
No. 909	8"	36	3 1/4 lbs.	ZIBUC	9.20
No. 909	10"	3/4	3.34 lbs.	ZIBWA	9.60
No. 909	12"	34"	4 1/4 lbs.	ZIBYE	11.50
No. 909	18"	34"	5 1/2 lbs	ZICEZ	18.00

Packed six in a box



NO. 7777 SCREW DRIVER



Torque Tested Blades

A sturdy, serviceable screw driver made in the five most saleable lengths. Blades are hammer-forged from specially tough steel, hardened and tempered their entire length. Forged lugs on shank prevent turning in handle. Blades and ferrules nickel plated and burnished. Hardwood handle finished in black lacquer with red end. Fluted for sure grip.

	Length Blade	Diameter Shork	Weight Box	Code	Price dux.
No. 7777	3"	7/2°	1 34 lbs.	GICAB	\$2.50
No. 7777	4"	952"	2 1/2 lbs.	GIDED	2.90
No. 7777	5"	5%*	3.34 lbs.	GIFFO	3.45
No. 7777	6"	5%	3 % lbs.	GIGLA	3.45
No. 7777	8*	3/4"	6 1/4 lbs.	GIHUN	4.85
		Mark one of the con-			17/100

NO. 355 CABINET SCREW DRIVER



Torque Tested Blades

Manufactured from the best materials obtainable for the purpose and finished in keeping. The blades are hammer-forged from a high grade tool steel, carefully hardened and oil tempered and nicely polished. The handles are made of hardwood, fluted to give a good grip and nicely finished in mahagany lacquer. Handles are protected by heavy steel ferrules, securely pinned on.

	Length Blade	Diometer Blode	Weight Box	Code	Price dick
No. 355	21/2"	312"	3/a 1b.	YIWAY	\$4.80
No. 355	3 1/2"	7/22 "	% lb.	YIWEZ	5.00
No. 355	4 1/2"	75 m	1 lb.	YIWIB	5.20
No. 355	51/2"	7/12 **	1 lb.	YIWOC	5.60
No. 355	61/2"	352 **	1 1/4 lbs	YIWUD	6.00
No. 355	81/2"	722 "	1 1/4 lbs	YIZAB	7.60
			eir in a har	11.1.200	2.165

F 500 EA III G 500

NO. 331 JEWELERS' SCREW DRIVER



A slim, light screw driver of the best quality suitable for the most delicate work. The blades are hammerforged from the best quality tool steel, carefully hardened and tempered.

The handles are hardwood with a fine mahogany lacquer finish. They are protected with a nickelplated steel ferrule.

	Length Blade	Digmeter Blode	Weight Box	Code	Price dos
No. 331	2"	244"	3/s lb.	YINPA	\$3.85
No. 331	3*	764"	3/s lb.	YINSO	4.10
No. 331	4"	14.	1/2 lb.	YINUT	4.40
No. 331	5"	164"	1/2 lb.	YINYV	4.85
No. 331	6"	364"	36 lb.	YIOCH	5.30
No. 331	8"	364"	34 lb.	YIOFK	6.40

Packed six in a box



NO. 69 STUBBY SCREW DRIVER



A tool small enough to be unnoticed in the side pocket and still fits the palm of the hand so snugly and with such a positive grip that screws out of all proportion to its size are driven or drawn with ease. An invaluable tool for general repair work, machine adjustments, appliance repairs, and all work in close quarters.

The finely polished tool steel blade, 11/2 inches long, is set in a fluted hardwood handle finished in natural lacquer and protected with a heavy steel ferrule.

No. 69

Length Blade 11/2"

Owered 4 1/2"

Weight Box 14 ozs.

Code YALKA \$0.30

Packed six in a box

NO. 199 OFFSET SCREW



This unique driver is equipped with four blades, two at either end set at right angles to each other and the pair at one end set at 45° from the pair at the other. This provides a blade position for eight positions of the screw slot, making it possible to handle screws otherwise inaccessible. Provides power for starting or setting large screws.

Blades are machined from fine quality manganese tool steel, hardened and tempered for maximum toughness. Nicely finished.

No. 199

Length 514 Weight Box 1 1/2 lbs.

Code YELOW Price each \$0.50

Packed six in a box

NO. 797 OFFSET SCREW DRIVER



A wonderful tool for reaching out-of-the-way screws, starting frozen ones, or wherever a lot of power is necessary. Forged from a fine grade of octagon steel, carefully hardened and tempered, with the bits nicely polished. Blades are set at right angles to one another, and on opposite sides of the handle. Made in two sizes, 41/4 and 61/4 inches.

Length No. 797 4 1/4" 1 1/4 lbs. No. 797 61/4" 3/4" lbs. Packed one dozen in a box

Weight Box

Code ZEGMO ZEGNA

Price doz. \$3.15 6.00



SCREW DRIVER BITS



An unexcelled line, hammer-forged from the best quality of steel procurable for the purpose. Carefully hardened, tempered and nicely polished.

Points carefully formed and accurately finished to fit the slats of the size screws for which they are intended. Shanks well finished to fit securely in two-jawed or bit brace chucks. Length, 5 inches overall.

	Size	Size Sirewi	Weight Sox	Code	Free Co.
No. 351	5%."	6 to 8	15 16.	YIVOB	\$4.00
No. 351	5/4"	8 to 12	1/2 lb.	YIVUC	4.00
No. 351	** ***********************************	12 to 16	34 lb.	YIVWA	5.20
No. 351	7/14	16 to 20	% lb.	YUHTE	5.20
No. 351	3/4	20 to 24	% lb.	YUHUX	5.20
No. 351	Asst. 34-34"	6 to 16	1/4 lb.	YUNIC	4.40

Packed six in a box

BITS FOR SPIRAL RATCHET SCREW DRIVERS

For Standard Slotted Screws

								F	1.68
Fitting	Width	240.	Wadde	No	Width	No.	Weight Doz.	Set.	Desc
Nos. 67-670	732"	1516	3%7	1515	722	1514	34 lb.	\$0.90	\$3.60
Nos. 61-610	274	1201	722"	1202	54"	1203	7/a 16.	.90	3.60
Nos. 62-620	34"	1166	1/22	1168	714	1167	1 lb.	.90	3.60

For Phillips Recessed Head Screws



icensed under U. S. Patent No. 2,046,840

No.	Fitting	Philips Size	Weight Doz.	Free ret
P17	Nos. 67-670	No. 1	34 lb.	\$5.75
P27	Nos. 67-670	No. 2	34 lb.	5.75
P11	Nos. 61-610	No. T	34 lb.	5.75
P12	Nos. 61-610	No. 2	34 fb.	5.75
P13	Nos. 61-610	No. 3	% Ib.	5.75
P22	Nos. 62-620	No. 2	34 lb.	5.75
F23	Nos. 62-620	No. 3	34 lb.	5.75

CHUCK AND DRILL ATTACHMENTS

For Spiral Ratchet Screw Drivers





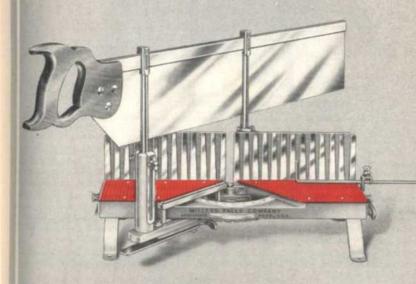


These attachments for the spiral ratchet screw drivers on page 39 convert them into an efficient automatic drill for boring small holes, greatly increasing the utility of the driver. The chuck has a ball lock that holds New Style, No. 401 Drill Points securely. It has a knurled tightening nut which is nicely polished, as is the shank. Eight sizes of drills, 1/16 to 1/164 inch in diameter.

	For Use with Screw Driver	Drill Foliage	Sizes	Weight	Code	From Fort
No. 6700	Nos. 67A and 670A	3	1 to 3	1/4 lb.	GAMOT	\$0.70
No. 6100	Nos. 61A and 610A	8	I to 8	Vá Ib.	GAMIC	1.30
No. 6200	Nos. 62A and 620A	8	1 to 8	1/4 lb.	GAMOX	1.30

Packed one in a round wooden box

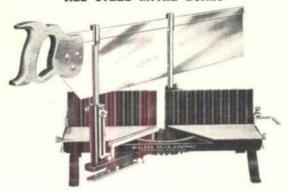
MITRE BOXES



MILLERS FALLS
TOOLS
SINCE
1868



ALL STEEL MITRE BOXES



UNBREAKABLE ALL-STEEL CONSTRUCTION THROUGHOUT

Every part in the assembly of this fine box is made of steel. It is unbreakable and free from replacements or repairs. The design and construction guarantee continuing accuracy of angular and vertical cuts and lasting durability.

The swinging lever, carrying the posts and saw guides which operate in them and the locking devices, swings freely from 45° to 90° left or right. It can be positively set at the most used angles by means of the lever lock which engages the precisely located notches on the lower side of the graduated guadrant. Or it may be set at any intermediate angle by means of the compression lock.

The extra long saw guides are equipped with three point "Oilite" bronze bearings giving almost effortless saw travel. They also have adjustable gauges for maintaining the proper maximum depth of cut with relation to the bed plates after saw filing. The guides hold the saw in the elevated position illustrated, when not in use, by means of automatic spring catches located in the posts. Depth gauges located on the side of the posts limit the cut to any desired depth.

A length gauge is provided on one end and a stop on the other end of the bed for cutting angles more acute than 45° and holding work against the back. The bottom plates are roughened to keep the work from slipping.

Each box is thoroughly tested for accuracy using the high grade back saw that is shipped with it. Boxes without saws are available but their accuracy cannot be guaranteed.

The bed, back, swinging lever, posts and legs are finished in black enamel; the bed plates in red enamel. All exposed metal parts nicely nickel plated.

Capacity of all sizes, with swinging lever extended, is $10\frac{1}{2}$ inches at right angle, $7\frac{1}{4}$ inches at mitre. Length of bed $19\frac{1}{4}$ inches; width $4\frac{1}{2}$ inches; height of back $3\frac{3}{4}$ inches.

	Size Saw
No. 1244C	24 x 4"
No. 1264C	26 x 4"
No. 1285C	28 x 5"
No. 1305C	30 x 5"
No. 1306C	30 x 6"

No.	1002C	for	4"	Saw
	1003C			
No.	1004C	for	6	Saw

ices Complete	Shipping Weight	Code	Price worth
211/2 lbs.	271/2 lbs.	ZITRE	\$45.40
22 lbs.	28 lbs.	ZITUV	46.00
23 lbs.	31 lbs.	ZITWY	50.00
231/2 lbs.	31 lbs.	ZIUGH	54.00
25 lbs.	33 lbs.	ZIUHJ	57.00
Prices withou	it Saw		
	0.0	THE PARTY	20.00

ZIROR

ZIRPE

35.80

39.00

Packed one in a carton

23 lbs.

Ibs.

19

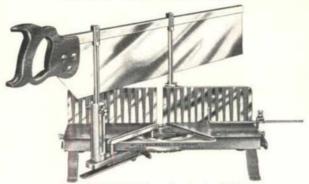
20

lbs.

lbs.



LANGDON ACME MITRE BOXES



Three Point "Oilite" Bronze Bearing Saw Guides

Langdon Acme has always been the outstanding metal mitre box. Now, more than ever, it is the most desirable box made.

The one piece cast bed and back have been redesigned for much greater strength and are precisely milled at right angle to one another. The legs are made of steel and are extended for greater stability.

The extendable, swinging lever is now made of solid steel as are the posts and saw guides. The saw guides are equipped with three "Oilite" bronze bearings providing easier and smoother saw travel.

Mounted on the steel posts in which the saw guides operate are adjustable depth gauges to regulate the depth of cut and also stops to hold the guides and saw elevated for quick changing of work on the bed. Still another adjustment is provided on the guides to maintain the proper maximum depth of cut with relation to the bed plates and to compensate for filing of the saw.

The swinging lever travels freely from 45 to 90° right or left and locks automatically at the most used angles. It can be locked at any intermediate angle by means of the additional compression lock.

A length gauge is provided on one end of the bed and a stop for cutting acute angles or holding work against the back on the other. The bed plates are steel scored to prevent slipping.

The highest quality back saws are supplied, each tested for accuracy in the box with which it is shipped. The accuracy of boxes shipped without saws cannot be guaranteed.

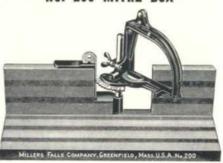
The bed, back, swinging lever, posts and legs are finished in gray enamel. The bed plates are ted enameled. All exposed metal parts, except the saw, nickel plated.

Maximum capacity of all sizes $10\frac{1}{2}$ inches at right angle; $7\frac{1}{4}$ inches at mitre. Length of bed $19\frac{1}{4}$ inches; width $4\frac{1}{2}$ inches; height of back $3\frac{1}{4}$ inches.

		Prices Comple	te With Saw		
No. 72C	Size Sow 24 x 4"	Net Weight 27 ½ lbs.	Shipping Weight 33 ½ (bs.	Code LADDE	\$45.40
No. 73C	26 x 4"	28 lbs.	34 lbs.	LADIM	46.00 50.00
No. 74C No. 75C	28 x 5" 30 x 5"	29 lbs. 29 ½ lbs.	37 /bs.	LADLE	54.00
22		Prices With	nout Saw		
No. 1071C No. 1074C	For 4 inch saw For 5 inch saw	24 lbs. 25 lbs.	28 lbs. 29 lbs.	LAIRD *	32.80 35.80
		Developed and an arrival	in an employee		



NO. 200 MITRE BOX



The frame of this box is made of laminated wood. The saw guide is designed so that either a box or panel saw may be used.

The saw guide is mounted on a steel post and can be adjusted freely for various angles and heights. It is provided with three screws for adjustment to the thickness of the saw blade used.

A steel index plate, indexed and clearly marked for the six commonly used angles, 0, 9, 22½, 30, 36 and 45°, right or left, is fixed to the saw guide. To set the guide at any one of these angles the steel slide key in the frame of the box is lifted and the guide swung until the proper notch in the index plate is opposite the key. The key is then pushed down until it seats firmly in the notch.

Any intermediate angles can be obtained by using the thumb screw at the back of the saw guide. This thumb screw is also used for setting the guide at any desired height.

When a back saw is used exact depths can be sawed by raising the saw guide on its post to the proper height so that the shoulders provided prevent the saw going below the desired point.

Bed filled and lacquered. All castings black enameled.

No. 200 Dimensions 16 x 4 3/4 x 4 "

x 4" Weight 7 lbs

Code

\$10.00

Packed one in a carton

NO. 214 SAW SET



A sturdy set of pistol grip design with a powerful leverage that makes it easy to obtain a positive and uniform set on any saw with a pitch of from 2 to 14 teeth per inch. Good visibility so that the hardened, triangular-shaped plunger can be centered quickly and surely on the tooth to be set.

The anvil is carefully hardened and is quickly adjustable to the pitch of tooth to be set. This adjustment is locked by means of the upper knurled thumb nut. An adjustable steel guide is also provided.

Frame and handles are finished in gray and red ename!.

All steel parts nickel plated except the hardened anvil.

No. 214

Coposity Fitches 2 to 14

Weight 1 ½ lbs. YEPRA

\$2,80

Packed one in a box



CARPENTERS' COMBINATION SQUARES



Etched Graduations Level and Scriber

These are accurate, well-finished squares, made especially for the carpenter. They can be used as a try square, mitre square, depth gauge, marking gauge or as a level or plumb.

The steel blades are 9 or 12 inches long and 1 inch wide, accurately graduated in 8ths and 16ths on one side and 16ths and 32nds on the other. The graduations and figures are clearly etched—not stamped.

The beam has accurately milled working faces with polished edges and black enameled web. It has a cat's-eye level vial accurately set in the body which can be used either as a level or a plumb. A sturdy, well-pointed scriber is also supplied.

The beam can be slipped along the scale and locked at any point by tightening the knurled thumb nut.

 Length Blode
 Weight
 Code
 Price each

 No. 9500
 9"
 14 ozs.
 ZOPER
 \$1.60

 No. 1200
 12"
 15 ozs.
 ZISPA
 1.70

Packed one in a box





Etched Graduations

An accurate, well-finished square made especially for the carpenter. It serves a number of important functions such as try square, mitre square, depth gauge or marking gauge.

The steel blade is 12 inches long and 1 inch wide. It is well finished and clearly and accurately graduated in 8ths and 16ths on one side and 16ths and 32nds on the other. Both figures and graduations are extremely legible as they are deeply etched — not stamped.

The working faces of the beam are accurately milled with polished edges. The web is finished in glossy black enamel. When the knurled binder nut is loosened the blade can be moved to left or right desired and locked at any point.

No. 1000 12" 14 ozs. ZIRAD \$1.40

Packed one in a box



NO. 365 DIAMOND POINT AWL



Forged Blade with Steel Bolster

This good tool has thoroughly demonstrated its quality in the hands of thousands of users. Its usefulness is almost unlimited and no tool box or shop is complete without one. It is indispensable for laying out work on wood, soft metals and other similar materials; making holes for starting nails or screws and innumerable other uses.

The blade is hammer-forged tool steel, carefully hardened, tempered and polished. It runs clear through the handle and is locked into a steel head set flush with the end of the handle. The handle, protected by a heavy, nickel plated steel ferrule, is selected hardwood with a natural lacquer finish and is fluted to give a good grip. These flutes also prevent the tool from rolling.

No. 365

Blode 3 1/2" Oversit 634"

Weight.

YOANE

\$8.00

Packed six in a box

NO. 10 AWL



A smaller, lower priced awl that is equally useful. The blade, 2% inches long, is nicely pointed, tapered and polished. The blade is securely set in a solid, hardwood handle protected by a nickel plated ferrule. Handle finished in natural lacquer.

No. 10

Blade 3 1/2" Overall 5" Weight 1 oz. YOALO

\$2.10

Packed one dozen in a box

NO. 211 TACK CLAW



The blade of this very efficient tool is carefully shaped and finished for pulling tacks and small, headed nails rapidly and with little or no effort. It is forged from a high grade of $\%_2$ inch steel, hardened, tempered and polished. The comfortable, hardwood handle is protected by a nickel plated ferrule and nicely finished in mahagany lacquer.

No. 211

7"

Weight 3 ½ ozs. Packed six in a box YEPIX

\$0.40

TAMES AND ADDRESS OF THE PARTY OF THE PARTY



NO. 227 BUTT GAUGE



The installation of butts and hinges has been simplified and speeded up by the redesign and improvement of this tool.

The body is made of two smooth die castings. The rods are steel, accurately graduated, with sharp, hardened, double edged spurs that make legible marks easily.

Warking faces of the body are polished with the rest of the body finished in gray enamel. Rods and knurled set screws nickel plated.

	Length	Weight	Code	Price each
No. 227	31/2"	8 ozs.	YETRE	\$2.40
		Packed one in a box		

CARPENTERS' PLUMB BOBS

These plumb bobs are accurately machine turned from cold rolled steel with the points carefully sharpened. They hang true and insure positive accuracy in plumbing and leveling.

They are nicely polished and nickel plated.

10000	Length	Weight	Code	Price each
No. 1	234"	3 ors.	HOYD	\$0.40
No. 2	31/2"	5 ozs.	LOACH	.50
No. 3	4 *	7 1/2 021	LIVER	.70
No. 4	5 "	12 025.	LOANY	.90





NO. 56 BENCH HOOK

A strong, rugged tool with a head having four different faces, any one of which can be used in the working position and set at any desired height up to 1½ inches. Spring automatically raises hook when lock is released. These adjustments are controlled by the lock screw in the center arm. Quickly and easily installed by simply boring two holes: one 2 inches in diameter 1½ inches deep, and one 1 inch in diameter clear through the bench and setting two screws.

The steel hook is nickel plated. The edge of the socket is polished and the inner surface red enameled.

	Max Lift	Weight	Code	Price each
No. 56	1 1/4"	11 ozs.	LIVID	\$1.65
		Destand our lane have		



NO. 396 COUNTERSINKS







Rose Pattern for use in mild steel, iron and soft metals

These countersinks with square bit brace shanks, available in three diameters, are hammer forget from a high quality of tool steel carefully hardened and tempered. The flutes are milled and the cutting edges ground. Angle 82°.

	Diometer	Length	Weight	Code	Price do:
No. 396	1/2"	4 1/4"	2 ozs.	YOFIM	\$8.00
No. 396	3/4"	4 1/4"	2 ozs.	YOFOX	8.00
No. 396	3/4"	41/4"	2 ozs.	YOFME	8.00
		Packed	six in a box		

NO. 394 COUNTERSINK



Two lipped for wood and other soft materials

Hammer forged from high quality tool steel with two cutting lips and square bit brace shank carefull hardened and tempered. Head and body polished. Angle 82°.

No. 394 34" Length Weight Code Frice 6th
No. 394 34" 4 1/4" 2 ozs. YOFEM \$5.00

Packed six in a box



NO. 410 COUNTERSINK



For use in Power Tools

For countersinking holes to admit the heads of standard screws in mild steel, iron, soft metals, wood and similar materials. Turned from a high quality tool steel with milled flutes and ground edge Fitted with ¼ inch round shank for use in three-jawed chucks of hand or power driven drills. Nicely polished. Angle 82°.

Leisgth

No. 410 1/2" 1/4" 1 oz. YOFTO

Packed one dozen in a box

Weight

Price 60

\$4.8

Code



NO. 4100 DISPLAY UNIT

COUNTERSINKS AND SCREW DRIVER BITS

A bright, very substantial unit that displays these small tools to excellent advantage and originates many sales.

The base is made of solid pine and the upright panel of masonite. It is lacquered and silk screened in three colors, red, gray, and black.

Base 5" by 6 3/4"; Height 9".

Supplied entirely free with the following assortment:

6 No. 410 Countersinks

4 No. 394 Countersinks

34" Countersinks 2 No. 396 3 No. 396 1/4" Countersinks

3 No. 396 1/2" Countersinks

6 No. 351 Ass't Screw Driver Bits

No. 4100 Display Unit Complete

\$12.60

Packed one unit in a carton



NO. 11 BIT EXTENSIONS



Designed to follow an 11/16 inch bit or larger but not recommended for bits larger than 13/16 inch. A neat, strong extension of the solid socket type with socket forced on to the shank and pinned. Chuck shell made of heavy seamless tubing is controlled by a coarse thread operated by turning the knurled collar. Entire tool nicely polished.

4300	Length	Weight	Code	Price each:
No. 11	18"	1 lb.	CAMEL	\$3.40
No. 11	21"	1 ½ lbs.	CAMFO	3.55
No. 11	24"	1 1/4 lbs.	CAMIS	3.65

Packed one in a box

NO. 35 BIT EXTENSIONS



Designed to follow an 11% inch bit or larger but not recommended for continuous use on bits larger than 13/4s inch. The one-piece socket and shank construction of this extension makes it very strong. Chuck shell of extra heavy steel tubing. Drop-forged steel jaws positively seated in socket hold bits tecurely and in good alignment. Chuck operated by turning knurled collar. Upper hexagon portion for tightening with a wrench when desirable.

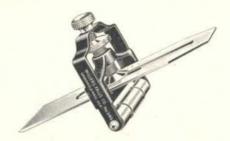
No a-	Leisight	Weight	Code	Price each
No. 35	18"	13 ozs.	CABIO	\$3.40
No. 35 No. 35	21"	14 ozs.	CACKO	3.55
.0. 35	24"	16 ozs.	CADDY	3.65
		The State of the S		

Packed one in a box



NO. 240 CHISEL AND PLANE IRON SHARPENER





A very simple but efficient device for putting a fine edge on chisels, plane irons and other edged tools

It overcomes the imperfections of free-hand sharpening and honing, insures a perfectly flat beve at any desired angle, saves time and prolongs the life of the blade.

The blade is held rigidly in the holder by means of the lower knurled thumb screw and the angle adjustment is controlled by the upper thumb nut. Still further angle adjustment can be secured by changing the position of the blade in the clamp.

After firmly clamping the blade, place the tool on an oilstone or hone and adjust to the desired angle or bevel. The roller bearing rolls freely on the stone and a keen edge is secured in a minimum of time.

No. 240

Coposity 2.1/4." Weight 11 ozs Code ESDER From ent

Packed one in a box

NO. 36 BIT GAUGE



Fits any type of auger bit, clamping securely to the twist of the bit. Clamp controlled by two steel wing nuts. Two smooth shoes prevent marring of the work. Entire tool nickel plated.

No. 36

Length 2" Weight 4 ozs.

Code AWASA \$0.75

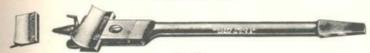
Packed six in a box



Price each

Code

EXPANSIVE BITS



No. 48

A finely made and finished bit of the Clark Pattern with spurs, cutting edges, throats, screws and cutters designed to function in unison to give a fast, clean cutting bit. Made of the highest quality special bit steel throughout. Each bit equipped with two cutters.

Weight

All parts of the bit highly polished except the square shank.

No. 48	% to 3 "	% lb.	BOLLO	3.10
100000000		Packed one in a box		and the same of th
		Extra Cutters		
	Fitting	Ce	pody	Price doz
No. 1	No. 47	1/2	to 1/4"	\$4.10
No. 2	No. 47		to 1 1/2"	5.05
No. 3	No. 48		to 1 34"	7.15
No. 4	No. 48		to 3 °	8.50
No. 5	No. 48	3	to 4 "	12.75
No. 6	No. 48		10 5 *	17.00

SCREW ADJUSTING EXPANSIVE BITS



No. 151

A finely made and finished bit with a positive screw adjustment of the cutter which absolutely prevents thifting even in the toughest woods. The cross feed screw meshes with the cutter and also the plate. One complete turn of screw increases or decreases diameter of hole 1/8 inch.

The deep, clean cut screw, sharp spurs and cutting edges make it on extremely easy boring bit. Two cutters. All parts of the bit highly polished except the square shank.

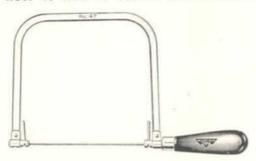
No. 151 No. 152	% to 1 %" % to 3	⅓ fb. ⅓ fb.	BONOR	\$2.35 3.40
	P	acked one in a box		
		Extra Cutters		
20	Fitting		Capacity	Price dox

		7 Collers	
W. CO	Fitting	Coposity	Price doz.
No. 1	No. 151	% to 1 %"	\$3.90
No. 2	No. 151	1 1/2 to 1 1/4"	4.85
No. 3	No. 152	% to 1 34"	6.80
No. 4	No. 152	1% to 3 "	7.75
No. 5	No. 152	3 to 4 *	11.60
No. 6	No. 152	4 to 5 "	15.45

Be sure to specify number of bit cutters are to fit



NOS. 43 AND 47 COPING SAW FRAMES



These fine frames are identical except for their depth of throat. The frame is made of $\frac{3}{16} \times \frac{3}{16}$ ind round edge spring steel. The studs are designed for holding 6 or $\frac{6}{12}$ inch coping saw blades of the loop, pin and other types. The pins set firmly in the studs permit the blade to be turned in any desired direction. Tension on the blade is controlled by turning the mahagany lacquered hardwood handle One No. 65 blade furnished with each frame.

All exposed metal parts heavily nickel plated and buffed.

61/2 × 1/2"

No. 65

	Depth Throat	Weight	Code	True est
No. 43	4 34 "	6 025.	IRIAN	\$1.20
No. 47	61/2"	9 ozs.	IRITO	1.4

No. 43 packed six in a box No. 47 packed four in a box

NO. 50 COPING SAW BLADES

These blades of the loop or turned end pattern are made of fine steel uniformly heat-treated to produce excellent results. The teeth are keen and properly set for fast, clean cutting.

	Size	Weight Gross	Code		Proce. p. C.
No. 50	6 × 1/4"	6 ozs.	IROUS	Wired	\$3.00
No. 50	6 x 1/4"	6 ozs.	IROUX	In Envelopes	3.10

Packed one dozen in an envelope or in bulk in wired bundles of one gross consisting of 12 bundles of one dozen ed

NOS. 60 AND 65 COPING SAW BLADES



Pin pattern blades are heavier, cut faster and straighter and will outwear the finer tooth blades. Both the Nos. 43 and 47 Coping Saw Frames.

fit the Nos. 43	and 47 Coping Saw Fran	nes.		
	5-10	Weight Gross	Code	Prox of
No. 60	6 x 352"	9 ozs.	ISCHI	\$3.30

11 ozs. Packed one dozen in an envelope ISIAC



NO. 106 CARVING TOOL SET

A set of six carefully selected tools to give as wide a range of operation and effects as possible in wood, linoleum, soap and similar materials.

The blades are forged from high quality steel, carefully heat-treated to hold a keen edge and nicely polished. The handles, protected with nickeled ferrules, are hardwood with a mahogany lacquer finish.

Set consists of one each of the following tools:

A	3/4"	Straight Chisel	\$0.75
5	3/6"	Bent Chisel	.65
C	3/4"	Skew Bevel Chisel	.65
D	36"	Bent Gouge	.75
E	3/2"	U Tool	.75
F	1/2"	Veining Tool	.85

Length Weight No. 106 6 14" \ 15 1b.

Code YAYNA \$4.40

118

Packed one set in a box

NO. 107 CARVING TOOL SET



This inexpensive set has started thousands in the fascinating hobby of wood and linoleum block carving. It is particularly suited for the Boy Scouts and many other handicraft groups.

The blades are forged from high quality steel, carefully heat-treated and nicely finished. The hardwood handles, which fit snugly into the palm of the hand, are finished in clear lacquer. They are flatted on one side so they are in proper position when picked up from the bench.

The set consists of one each of the following:

В	240	Bent Chisel	\$0.65
C	1/4	Skew Beyel Chisel	.65
D	3/4"	Bent Gouge	.75
E	352	U Tool	.75
F	352"	Veining Tool	.85
		Sharpening Stone	.35

No. 107

5"

Weight 34 lb.

YOYOL

\$4.00

Packed in a lacquered lock corner wood box with slide cover



GLASS CUTTERS AND WHEELS

There are several fine details that enter into the manufacture of Millers Falls Glass Cutters that are not generally appreciated. A very fine grade of alloy steel is used in making the wheels which of course, are the vital part of the tool. The wheels must be machined with precision to provide just the exact bevel on the edge for maximum cutting efficiency, exactly the right diameter hole for the pin on which it is to rotate, and the exact width for the frame in which it is to run.



The heat treatment given the wheels is unique and extremely precise — being held within very close limits. The process is the result of fifty years of research and experience in the perfection of these small cutters.

After hardening and tempering, the wheels are twice honed in oil on exceedingly fine India wheels to the critical angle or bevel that gives the easiest cut, cleanest break and the longest life on the grade of glass they are intended to cut.

Every Millers Falls Glass Cutter is actually tested on glass by a skilled operator before final acceptance. They are strung on wire and sealed for positive identification as to type.

Type	
	Red Seal
D	Blue Seal
F	Black Seal

Fitting Cutters Nos. 1 and 478 337 and 444 218

\$1.00 1.50 1.00

Packed one dazen or ten dazen in an envelope

NO. 444 GLASS CUTTER



The perfect finger-fitting form of the frame of this cutter has made it a tremendously popular tool It drops into natural position between the first two fingers and can be used for hours without fatigut or discomfort.

It is equipped with a tested Type D wheel set in a well-polished frame with three standard width of breaker notches. The handle is finished in bright blue enamel with a red tip.

No. 444

Length 5 1/4" Weight dos.

Code YOMVE 53.50

Packed one in a carton; one dozen cartons in a box



NO. 4412 FREE DISPLAY

The attractive counter display unit illustrated, holding twelve cutters, will be supplied entirely free with an initial order for two dozen No. 444 Cutters Weight of display only 1/8 lb.



NO. 1 TURRET HEAD GLASS CUTTER

This is the original turret head glass cutter patented by Goodell-Pratt which has earned and maintained such a remarkable reputation for fine performance and low cost operation. Henceforth, this popular cutter will be branded Millers Falls.

The turnet is turned from a solid bar of selected steel with the six wheel axles, integral parts of the turnet. Infinite care is taken in the heat treatment so that the axles will outwear many wheels. The turnet and turnet screw are rust-proofed by the Udelyte process.

Six honed and tested Type C "Red Seal" wheels are mounted on the turret axles. Turret and wheels are locked to the highly polished and nickel-plated steel frame by means of a rust-proofed screw. Wheel No, 1 is used until worn out, then the screw is loosened and wheel No. 2 rotated into position and so on until all six have been used. Always insist on genuine Type C Wheels for replacements.

The handle is hardwood, comfortably shaped, nicely finished in mahogany lacquer and protected by a buffed nickel ferrule.

Every genuine No. 1 Turret Head Cutter has the Millers Falls name stamped on the frame and handle and is packed in a distinctive three-color carton.

Length

5%"



Code WYBCE \$7.00

Packed one in a bax; twelve baxes in a display carton illustrated above

Weight doz.

% lb.

NO. 337 GLASS CUTTER



A nicely balanced cutter with a comfortable handle on the end of which is a breaker ball that has sufficient weight to get excellent results.

It is equipped with a high grade tested Type D wheel set in a well-polished frame. The three standard widths of breaker notches are provided. The handle is finished in black and the breaker ball in red.

No. 337

No. 1

Length 5" Weight doz.

Code

\$3.50

Packed one in a cartan; one dozen cartans in a box



NO. 478 CIRCULAR GLASS CUTTER



Circles or arcs of circles from 2 to 12 inches in diameter are quickly and accurately cut with this too

It is equipped with a tested Type C wheel set in a head at the end of a graduated beam. Whe can be replaced very easily. The beam pivots freely in the metal standard so that the complete circ can be cut in one continuous sweep. To free the circle without breakage, six or more tangents should be cut with a straight cutter.

No. 478

Capacity 2 to 12" Weight 1/2 lb.

Code YOSAZ 52.0

Pocked one in a box

NO. 218 GAUGE GLASS CUTTER



The most practical tool ever designed for cutting the gauge glass ordinarily used in steam and hot was boilers and liquid gauges.

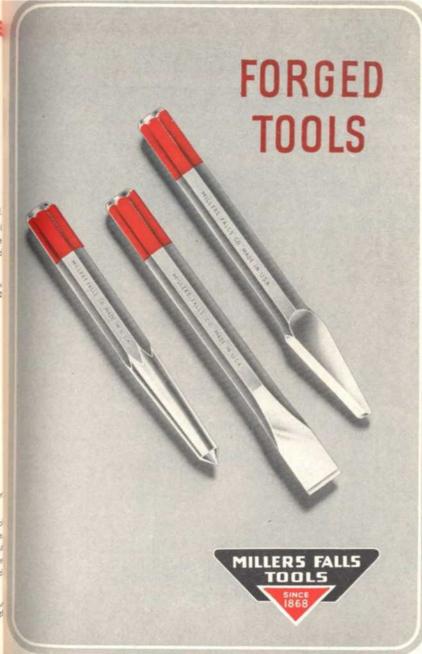
Owing to the very hard glass used in these gauges this cutter is supplied with a tested specified Fiblack Seal" wheel which is set at the end of a graduated steel beam and cuts from the inside giving a good clean break. The wheels are easily replaced. The length of glass cut off is determine be setting the sliding gauge on the graduated arm. The second steel beam merely counterbalant the cutting pressure on the outside wall of the tube. The steel beams are nicely polished and nickels Maximum cut six inches. Handles finished in red and black lacquer.

No. 218

Length 121/2" Weight 34 lb. YERRO

\$2.

Packed one in a box





NO. 1216 STAR DRILLS



These drills have remarkable free, fast cutting ability in concrete, brick and stone.

They are forged from a high grade of octagon alloy steel selected for its toughness and ability to hold an edge. The bit and head are carefully hardened and tempered for the severe service expected of them.

The bits and flutes are designed and proportioned to give ample strength and provide adequate thip clearance. The flutes taper back slightly and their outer face is ground concentric with the bit to insure free turning. The bit is pointed just enough to start holes easily at the desired point and keep it centered. The blades are long to permit resharpening without reforging.

The blades are polished and the head of the tool is finished in vermilion lacquer with polished face.

The body is finished in aluminum lacquer.

	Diameter of out	Diameter of stock	Length	Pocked per box	Weight	Code	Prior do.
No. 1216	1/4"	3%"	12"	12	2 1/a lbs.	ZOKLA	\$6.00
No. 1216	714"	3/4"	12"	12	2 1/4 lbs.	ZOKLY	6.60
No. 1216	36"	354"	12"	12	3 1/2 lbs.	ZOKME	6.80
No. 1216	314"	3/4"	12"	12	4 % lbs.	ZOKMO	7.50
No. 1216	1/2"	3/4"	12"	6	4 % lbs.	ZOKOP	7.80
No. 1216	3/4"	3/4"	12"	6	6 1/4 lbs.	ZOKOS	8.40
No. 1216	56"	1/2"	12"	6	8 1/a lbs.	ZOKPO	9.00
No. 1216	34"	3/4"	12"	6	12 1/2 lbs.	ZOKYR	9.60
No. 1216	3/4"	1/4"	12"	6	12 1/2 lbs.	ZOKYT	11.20
No. 1216	1."	3/4"	12"	3	17 % lbs.	ZOLAM	12.00
No. 1216	1 1/6"	7/4"	12"	3	25 lbs.	ZOLAS	15.60
No. 1216	1 1/4"	7/4"	12"	3	31 1/2 lbs.	ZOLEN	21.00
No. 1216	1 3/4"	1 *	12"	1	32 1/4 lbs.	ZOLET	26.40
No. 1216	1 1/2"	1 1/4"	12"	1	36 34 lbs.	ZOUP	30.00

NO. 470 CHISEL AND PUNCH SET





A most useful set of twelve forged chisels and punches put up in a convenient turned hardwood box with a mahogany lacquer finish.

The set consists of the twelve tools listed below which are fully described on the following pages.

1 No. 573 ½" Taper Pin Punch
1 No. 573 ½" Taper Pin Punch
1 No. 1140 ½" Cape Chisel
1 No. 1140 ¼" Cape Chisel
1 No. 1150 ¾" Cold Chisel
1 No. 1150 ¾" Cold Chisel
1 No. 1150 ½" Cold Chisel
1 No. 1170 ¾" Solid Point Chisel
1 No. 1195 ¾" Solid Punch
1 No. 1195 ¾" Solid Punch
1 No. 1192 ¾" Prick Punch
1 No. 1202 ¾" Center Punch

Each tool forged from octagon alloy steel, carefully hardened and tempered with well ground and polished points and heads.

No. 470

Weight 2 ½ lbs.

YORAY

\$4.90

Packed one set in a box



FORGED TOOLS

The chisels and punches shown on this and the following pages are hammer-forged from a high grade of octagon alloy steel selected for its extreme toughness. The care exercised in heat-treating results in a uniformly high grade chisel. The blades and heads are ground and nicely polished. The heads have a distinctive vermilion lacquer finish.

NO. 1150 COLD CHISELS

-922	-	Watte	S FALLS CO. No.	1150		
Width of blade	Diameter of stock	Length overall	Forked per box	Weight	Code	Price doz.
1/4"	1/4"	5"	12	1/4 lb.	ZUKER	\$3.20
3/4"	3%	5"	12	1 34 lbs.	YOOKE	3.70
1/2"	3/6"	5"	12	2 % lbs.	YOOLV	4.00
3/8"	1/2"	6 1/2"	6	4 1/4 lbs.	YUZYR	6.60
34"	5/4"	7"	6	7 lbs.	ZABAM	8.90
1 "	3/4"	8 "	3	151/2 lbs.	ZEAHY	15.40

NO. 1140 CAPE CHISELS

	Width of blade	Diameter of stock	Leogth	Packed per box	Weight dozen	Code	Price daz.
lo. 1140 lo. 1140 lo. 1140	3/4"	%" %"	5"	12 12	1 % lbs. 1 % lbs.	YOORC ZEENG	\$4.50 5.00
o. 1140 o. 1140	5%** 3%**	7/2 " 5/4 "	6"	6	1 % lbs. 3 % lbs. 6 ½ lbs.	YOOPZ ZEEPH ZEERK	5.50 7.50 10.00
9. 1140	3/5"	3/4"	7 1/2"	6	10 1/4 lbs.	ZEEWP	13.80

NO. 1190 ROUND NOSE CAPE CHISELS

	September 1					
Width of point	Diameter of stock	Length	Pocked per box	Weight	Code	Frice das.
1/4"	3/4"	5"	12	1 % lbs.	ZUMTE	\$4.50
1/4"	1/2"	6"	6	3 1/2 lbs.	YOPAV	7.50
36"	34"	7"	6	6 % lbs.	ZUMUX	10.00

NO. 1178 DIAMOND POINT CHISELS

	20 10					
Width of point	Diameter of stock	Length	Focked per box	Weight	Code	Price das.
5/12 T	3/6 "	5"	12	1 34 lbs.	YOOVG	\$3,40
1/4"	1/2"	6"	6	3 3/4 lbs.	ZULVO	6.40
36."	3/4"	7"	A	7 lbs	ZUMAS	9.00

MILLERS FALLS Co. No. 1178

No. 1150 No. 1150 No. 1150 No. 1150 No. 1150 No. 1150

No. 1190 No. 1190 No. 1190

No. 1178 No. 1178 No. 1178



NO. 1202 CENTER PUNCHES



No. 1202 No. 1202 Diameter of stock 3/4" 1/2" Length overall 5" 51/2" Pocked per box 12 6 Weight dozen 1 34 lbs. 3 14 lbs.

YOPUB ZUNOY \$4.00 6.60

NO. 1199 PRICK PUNCH



No. 1199

Diameter of stock 3/8" Length overall 5" Packed per box 12 Weight dozen 1 3/a lbs.

Code YOPOZ \$4.00

NO. 1195 SOLID OR TINNERS' PUNCH



No. 1195

Diameter of point \$52." Diameter of stock 3/s" tergth overall 5° Pocked per box 12 Weight dozen 1 34 lbs.

YOPCY

\$4.00

NO. 1208 ALIGNING OR DRIFT PUNCHES

Marcas Face So No. 1208

Indispensable tools for construction work, in automotive shops, farms, or any job where holes must be brought into close alignment for riveting or bolting.

The long, evenly tapered points on these fine tools are very highly polished to a mirror finish ⁵⁰ that they drive easily and loosen up readily. They will not bend or break.

	of point	of stock	overall	per box	dozen	Code	True de
No. 1208	346"	1/2"	10"	3	5 1/a lbs.	ZUNUZ	\$10.60
No. 1208	3/4"	3/8"	12"	3	9 3/a lbs.	ZUNVE	Total



NO. 573 TAPER PIN PUNCHES





Forged from a high grade of octagon alloy steel, % inch in diameter, except the two smallest sizes which are 1/4 inch. They are carefully heat-treated and the points and heads well ground and polished. They have the same distinctive vermilion lacquered head that is used on the rest of the punch and rhisel line.

	Size	Diameter of stock	Length	Weight	Code	Price dat.
No. 573	3/52.**	1/4"	5"	34 lb.	YUMEZ	\$4.40
No. 573	Va **	1/4"	5"	34 lb.	YOHYT	4.40
No. 573	952	34"	6"	1.34 lbs.	YUMIB	4.40
No. 573	3/4"	3/6"	6"	1 34 lbs.	YOILT	4.40
No. 573	752"	3/4"	6"	1 3/4 lbs.	YUMOC	4.40
No. 573	1/4"	3/4"	6"	1 % lbs.	YOIPY	4.40
No. 573	5%	3/8"	6"	2 1/2 lbs.	YOIRB	4.40
No. 573	3/4"	36"	6"	2 3/4 lbs.	YOJAP	4.40

Packed one dozen in a box

Weight Code Price sat No. 472 Set of 5: (1/2, 1/4, 1/4, 1/4 and 1/2") YOREZ % lb. \$1.80

Packed one set in a box

NO. 572 PIN PUNCH SET

A useful and convenient set made up of the eight sizes of punches thown above, as follows: one each 1/12, 1/8, 1/12, 1/6, 1/12, 1/4, 1/6 and 1/4".

The container is a round hardwood block and cover nicely turned and finished, providing a convenient holder.

Weight No. 572 2 lbs.

YUMCO

Price set \$4.00

Packed one set in a box



NO. 433 CHISEL AND PUNCH SET

A set of four quality tools selected by and made up for several nationally known aviation training schools.

The four tools consist of:

1 No. 573 1/2" Pin Punch 1 No. 573 1/4" Pin Punch

1 No. 573 % Pin Punch 1 No. 1150 1/2" Cold Chisel

These are all hammer-forged from high grade octagon alloy steel with polished points and heads. The case is made of a serviceable fabric with artificial leather covering.

No. 433

Weight 8 oz.

Code YORAB Frice set \$1.70

Packed one set in a box



NO. 681 MACHINISTS' PIN PUNCHES



These punches are made from a very high grade of round tool steel about four inches long. The centers are knurled and the points, shanks and heads nicely polished. Every punch is very carefully hardened and tempered its entire length. Blued finish.

	Points	Stock	Weight doz.	Code	Price dos
No. 681	3/4"	3/4"	34 lb.	ZAUZ	\$2.60
No. 681	3/12"	714"	34 lb.	ZALOB	2.60
No. 681	1/4"	714"	1/s lb.	ZALUC	2.60
No. 681	9/22"	71a	% Ib.	ZALWA	2.60
No. 681	3/4"	714	% lb.	ZALYE	2.60
No. 681	%n"	3%	3/a 1b.	ZAMAY	2.60
No. 681	1/4"	36"	1 1/4 lbs.	ZAMCO	2.60
No. 681	Fis."	36"	1 1/4 lbs.	ZAMEZ	2.60

Packed one dozen in a box

NO. 997 HOLLOW PUNCHES



These punches are made from a very high grade of round tool steel about four inches long. The centers are knurled to insure a firm grip. They are very carefully hardened and tempered their entire length. The cutting edges are sharpened.

Made in fifteen sizes as follows:

	Size	Hole	Size body	Weight dos.	Code	From diff.
No. 997	1	364"	3/6"	1 1/4 lbs.	ZINKA	54.60
No. 997	2	512"	36"	1 1/a lbs.	ZINLE	4.60
No. 997	3	Sea."	3/4"	1 1/4 lbs.	ZINNO	4.60
No. 997	4	1/4"	3%	1 1/a lbs.	ZINON	4,60
No. 997	5	964	3/6"	1 1/2 lbs.	ZINUP	4.60
No. 997	6	732 T	36	1 1/2 lbs.	ZIOXY	4,60
No. 997	7	314"	3/4"	1 1/4 lbs.	ZIPAL	4.60
No. 997	8	7/10	The"	1 1/2 lbs.	ZIPEM	4.60
No. 997	9	1/4"	3/4"	1 1/2 lbs.	ZIPLA	4.60
No. 997	10	952	314"	1 1/2 lbs.	ZIPME	5.20
No. 997	11	514	1/2"	1-34 lbs.	ZIPOP	5.20
No. 997	12	1552	3/5"	1 34 lbs.	ZIPPO	5.20
No. 997	13	34"	59."	1.34 lbs.	ZIPPR	6.80
No. 997	14	12/2	9.4	2 lbs.	ZIPRA	6.80
No. 997	1.5	754	967	2 1/4 lbs.	ZIPRI	6.80

Packed one dozen in a box



NO. 460 CENTER PUNCH



Large square head provides large striking surface and prevents rolling. Hardened, tempered and carefully ground points and heads. Bodies nicely knurled, balance of tool nicely polished.

No. 460

Body 354

Length 4"

Weight dos. 17 ozs.

Code MALTA

Price dos. \$2.00

Packed one dozen in a bax

NOS. 141 AND 146 CENTER PUNCHES



Carefully ground, hardened and tempered points. Nicely knurled bodies. Shanks and heads polished.

No. 141 No. 141 No. 141

34" 3/4" 1/2" 1/2" No. 146

Body Weight daz. Length 4" 3/4 lb. 4" 1 1/4 lbs 4" 5"

21/4 lbs 234 lbs.

MALMA MANCH MANKS MANSE

Code

2.35 3.20 3.80

Price doz.

\$1.85

Packed one dozen in a box

NO. 465 PRICK PUNCH



Large square head provides large striking surface and prevents rolling. Carefully formed point and head are hardened and tempered. Nicely knurled body.

No. 465

Body 554

Length 4"

Weight doz. 17 ozs.

Code MARES Price doz. \$2.00

Packed one dozen in a box

NO. 167 PRICK PUNCHES



Carefully formed points and heads are hardened and tempered. Bodies nicely knurled, balance of tool polished.

No. 167 No. 167 Body 514" 3%"

ROSE TOOLS, INC.

Length 4" 4"

Weight dos. 34 lb. 1 1/4 lbs.

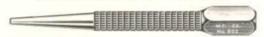
Code MARRY MARSH Frice dos. \$2.10 2.60

Packed one dozen in a box



NO. 800 SERIES OF NAIL SETS





This is the toughest, most serviceable nail set ever affered. It is made of fine quality molybdenum alloy steel, hardened and tempered to stand up under a lot of hard usage. The carefully cupped points are formed to give a good bite and equalize the stresses and strains so as to eliminate breakage. The deep knurling on the body gives a sure and comfortable grip. The square heads provide a large striking surface and at the same time prevent rolling. Points and heads are nicely polished.

	Diameter Point	Body	Length	Weight doz.	Code	Prox.dex.
No. 801	1/2"	314"	4"	1 16.	MOBAN	\$2.40
No. 802	352"	354"	4"	1 lb.	MOBBO	2.40
No. 803	3/22	214"	4"	1 lb.	MOSEX	2.40
No. 804	552"	514"	4"	1 lb.	MOBGA	2.40
No. 805	1/2"	366"	4"	1 lb.	MOBHI	2.40
No. 815	Assorted Dozen			1 lb.	MOBIL	2.40

Assortment consists of two each 1/12 inch and 1/12 inch an



NO. 825 NAIL SET DISPLAY

This attractive display stand holding the No. 800 Series Nail Sets has demonstrated its ability to multiply the volume of Nail Set sales many times. It is made of wood, nicely finished and silk screened in red, yellow and black.

Free with initial order for three dozen No. 815 Assorted Nail Sets.

No. 825 Display with three dozen Nail Sets

Weight Code 4 lbs. MOBIX



NO. 310 NAIL SETS



A good sturdy set of conventional design. Regularly supplied with blued finish unless bright finish is specified. Points and heads hardened and tempered.

	Digmeter point	Body.	Length	Weight dox.	Code	Price side.
No. 310	3/20"	214"	4"	7/a 1b.	MAGIC	\$1.80
No. 310	350 "	3/4"	4"	% lb.	MAGNA	1.80
No. 310	3/o *	514"	4"	7/s lb.	MAGOT	1.80
No. 310	4/0°	366"	4"	7/a lb.	MAGUS	1,80
No. 310	1/a"	314"	4"	% lb.	MAHOL	1.80
No. 310	Assorted			% lb.	MAHUT	1.80

Assortment consists of two each ½ inch and ½ inch and four each ½ inch and ½ inch
Packed one dozen of a size or assorted in a box





NO. 312 SET OF NAIL SETS

Price

\$7.20

This set consists of one dozen assorted sizes of No. 310 Nail Sets put up in a turned hardwood box, as illustrated, finished in clear lacquer.

No. 312 Set 1 ½ lbs. MAINE \$2.10
Packed one set in a box



NO. 381 BEARING SCRAPERS



These bearing scrapers are the best made. The slightly curved, tapering and recessed blade is designed to do nice scraping without chattering.

The blades are forged from a very high grade of tool steel correctly hardened and so carefully tempered that they will scratch glass and hold their keen razor-like edge over a long period. After being dulled by long usage they can be easily sharpened by a few strokes on an oilstone.

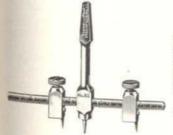
Cutting edges well ground. Blades and shanks have a pleasing jetalize finish. Ferrules nickel plated. Hardwood handle finished in mahogany lacquer. Code Price each

Weight box

Length overall

No. 381 No. 381 No. 381	2 1/2" 1 3 1/2" 1	8 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	YOCYP YODAK	1.05
No. 381	100.000	2" 3 lbs. acked six in a box	YODEL	1.30
	One each	Weight	Code	Price set
No. 740 Set No. 471 Set	1½, 2½ and 3½" cutting ed 2½, 3½ and 4½" cutting ed		ZAVIT YORCO	\$3.05 3.50

Packed one set in a box



ROSE TOOLS, INC.

Cutting edge

NO. 82 GASKET CUTTER

An improved cutter with hardened and tempered tool steel cutters and point, both of which are easily replaceable. Cutters reversible to obtain maximum and minimum capacities. Heavy graduated steel beam flattened on top to give a good bearing for the knurled set screws. Hardened square bit brace shank. Made of steel throughout, well polished.

Frice each Copposity Code % to 6" 9 oz. YADVI \$3.00 No. 82 Pocked one in a box

NOS. 92 AND 93 BRASS HAMMERS



These brass hammers will be found convenient and practical for use on finished work, or on any work where a soft hammer is desired. The brass heads and steel shanks are both nicely polished, and have hardwood handles with a mahogany lacquer finish.

	Head	Length	Weight	Code	Price wach
No. 92	% × 1 34"	7 1/4"	5 oz.	YAUXT	\$1.25
No. 93	3/4 × 2 1/4"	8"	7 oz.	YAVEN	1.50
		Packed one in	a box		



STEEL LETTERS AND FIGURES



These Steel Letters and Figures are made in two grades as specified below.

HAND CUT. The finest quality of stamp procurable. Every character guaranteed hand cut from the finest grade of tool steel. Recommended for use on all hard surfaces.

The faces are accurately formed, sharply cut and deeply relieved, insuring clear, legible impressions. Faces and well-formed heads are hardened and tempered with the utmost care to make these stamps the best and most economical for general industrial use on both hard and soft surfaces.

MACHINE MADE. The characters in these sets are formed on blanks of a good quality of tool steel by a specially developed machine process using superior master dies producing sharper, cleaner faces than usual. Ample relief is provided to produce clear, long-lived impressions.

Carefully hardened and tempered faces. A fine, durable stamp for general all around use on unhardened surfaces.

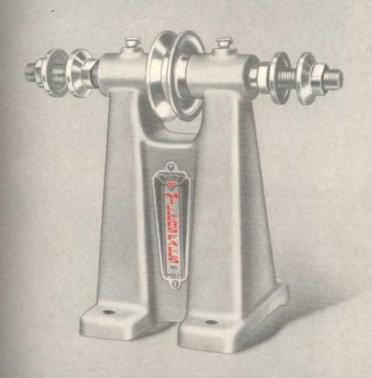
HAND	CUT
GOTHIC	FACE

MACHINE MADE

Coc	ZIIII	7				CONTRACT B	296,000	
No. 1300 Letters per set	No. 1350 Figures per set	Single characters	Size stock	Height theracter	No. 1500 Letters per set	No. 1550 Figures per set	Single characters	5 se proh
\$15.75 14.15 14.15 11.25 11.25 11.25 12.60 14.15 15.75 17.30 20.45 25.20 28.35	\$5.25 4.70 4.70 3.75 3.75 3.75 4.20 4.70 5.25 5.80 6.80 8.40 9.45	\$0.65 .50 .50 .40 .40 .50 .60 .70 .75 .85 .95	14 x 2 1/4" 14 x 3 1/4" 14 x 3 1/4" 14 x 3 1/4"	1/22" 1/24" 1/24" 1/12" 1/12" 1/12" 1/12" 1/12" 1/12" 1/14" 1/14" 1/14" 1/14" 1/14" 1/14" 1/14"	\$7.50 7.50 6.75 5.25 5.25 5.25 5.25 5.25 6.00 6.75 7.50 8.25 9.75 12.00	\$2.50 2.50 2.25 1.75 1.75 1.75 1.75 2.00 2.25 2.50 2.75 3.25 4.00 4.50	\$0.40 .35 .35 .30 .30 .30 .30 .35 .35 .40 .40 .45 .55	第222222222222222222222222222222222222
34.03	11.33	1,33	28 X 3 74	72	10.50	5.50	.70	% x 3"
	No. 1300 latters per set \$15.75 14.15 14.15 11.25 11.25 12.60 14.15 15.75 17.30 20.45 25.20	Ne. 1300 Interest per set Figures per set \$15.75 \$5.25 \$14.15 \$4.70 \$11.25 \$3.75 \$11.25 \$3.75 \$12.60 \$4.20 \$14.15 \$4.70 \$15.75 \$5.25 \$17.30 \$5.80 \$20.45 \$6.80 \$28.35 \$9.45 \$4.50 \$4.50 \$1.50	Latters Figures Single Sharecters	No. 1300 Latters per set per set shock per set set shock per set shock p	No. 1300 Latters per set per set per set per set set stock therecates stock thereous stock thereous stock thereous stock therecates stock thereous stock the	Ne. 1300	Ne. 1300 Ne. 1353 Single Size thioricitary Properties Size thioricitary Properties Size thioricitary Size thioricitary Properties Size Siz	Ne. 1300 Ne. 1350 English per set Single per set Shortcutters Shortcu

Sets of letters, sizes ½2 through ¼ inch consist of 28 characters, including & and a period. Sets of letters, sizes the through ½ inch consist of 27 characters, the period being omitted. Sets of figures consist of nine characters from 0 to 8, the 6 being used for the 9 Each set packed in a well made, nicely finished wooden box.

GRINDERS







NO. 120 GRINDING HEAD

Fitted with "Oilite" Bronze Bearings



A stocky machine with a solid frame and ample base to withstand years of service. The spindle is ½ inch in diameter and runs in two "Oilite" bronze bearings 1½ inches long. Bearings are lubricated through good sized spring top oiler,

The spindle is threaded at both ends, ½ inch by 20 thread and carries two sets of steel flanges 1½ inches in diameter to carry wheels up to 4 inches in diameter with a ¾ inch face and ½ inch hole. The V-belt steel pulley is 2¼ inches in diameter. Designed to drive from above, behind or below.

Frame nicely finished in glossy battleship gray. Flanges and pulley nickel plated.

No. 120

Height

4 1/2 × 4 1/4"

Weight 5 1/4 lbs. Code YEBAT \$4.00

Packed one in a box

NO. 125 GRINDING HEAD

Fitted with "Oilite" Bronze Bearings

Exactly the same as No. 120 above, but fitted with a clean, deep taper thread spindle in place of the wheel arbor on the left. This permits the use of buffing wheels and a great variety of wheels built on wood centers. On the right is a set of flanges and an all-steel three-jawed chuck that holds rods or drills from 0 to 3/s inch in diameter. Height given is to center of spindle.

No. 125 6" 4 1/2 x 4 1/2" 5 3/4 lbs. YEBVO \$4.50





NO. 130 GRINDING HEAD

Fitted with "Oilite" Bronze Bearings

Exactly the same as No. 120 above, but with 0 longer spindle on the right side. This is threaded $\frac{1}{2}$ inch by 20 thread and on it is mounted an all-steel chuck with three hardened jaws that hold 0 to $\frac{1}{2}$ inch round shank drills or rods. Flanges, chuck and pulley nickel plated.

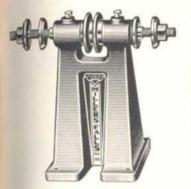
No. 130 6" 4 1/2 x 4 1/2" 5 1/3 lbs. YECDY \$4.70

Packed one in a box



NO. 150 GRINDING HEAD

Fitted with "Oilite" Bronze Bearings



A heavier head with bigger base, greater height and ½ inch spindle running in two "Oilite" bronze bearings 1½ inches long. The outboard portions of the spindle are turned down to ½ inch with 20 threads per inch. The bearings are oiled from two large spring top oil cups on the frame casting directly above the bearings. Arbor on either end of spindle with 1¾ inch flanges for holding wheels up to 6 inches or larger in diameter with 1 inch face and ½ inch hole. Flange nuts are hardened. The V-belt steel pulley is 2¼ inches in diameter and can be driven from above, behind or helow.

Frame finished in glossy battleship gray enamel. Flanges and pulley nickel plated.

No. 150

Height 7 1/2" Bose 5 x 5"

Weight 11 lbs. Code YEEVO Frice each

Packed one in a box

NO. 155 GRINDING HEAD

Fitted with "Oilite" Bronze Bearings

Built on the same frame as No. 150. The spindle is 34 inch in diameter and carries a deep, clean taper thread and a pair of wheel flanges on one end and a pair of flanges and chuck on the other.

The wheel flanges are 134 inches in diameter and hold wheels up to 6 inches or larger in diameter with 1 inch face and ½ inch hole. Hardened steel flange nuts. The chuck has three hardened steel jaws and holds 0 to 36 inch drills or rods. V-belt steel pulley is 21/4 inches in diameter and drives from above, behind or below.

Frame finished in glossy battleship gray enamel. Flanges, pulley and thuck nickel plated.

No. 155

Height 7 1/2" Bose 5 v 5"

Weight 11 ¼ lbs. Code YEFEE \$9.50

Packed one in a box







These wire wheel brushes are rigid and compactly made and have more wire per square inch of brush surface than the average wheel. Wires are tightly compressed and give greater wearing strength to brush. They have interchangeable bushings which slip into the 2 inch standard size opening

Arbor bushings can be furnished with 1/2 inch, 1/2 inch, 1/4 inch or 1 inch arbor hole.

It is important that the wanted diameter of the arbor hole be specified.



Extra arbor bushings, per pair \$0.25 Packed one wheel in a box

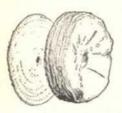
GRINDING WHEELS

These are the best quality wheels made in the most commonly used grains and grades. Especially adapted for use on electric drills and grinders, grinding heads, etc.



	Size	Arbor Hole	Grain and Grade	Weight	Code	Frice end
No. 1519	4 x 1/2"	1/2"	60 - M	34 lb.	DODAK	\$1.40
No. 636	6 x 1/2"	1/2"	36 - 0	1 1/2.1bs_	DODFA	2.40
No. 660	6 x 1/2"	1/5"	60 - M	1 36 lbs.	DODGU	2.40
No. 1036	10 x 1"	36"	36 - 0	7.36 lbs.	DODIL	8.30
No. 1060	10 x 1"	3/4	60 - M	7 3/2 lbs.	DODOM	8.30
No. 2036	10 x 1 1/4"	34"	36 - 0	8 1/4 lbs.	DODUX	9,6
No. 2060	10 x 1 1/4"	34"	60 - M	8 1/2 lbs.	DODET	9.60
		D i	and were subtand to so her	E Section 1		

BUFFING WHEELS



These buffing wheels will meet the need for light, portable buffers for polishing a number of different objects that have formerly necessitated hand work. The size of the wheel is 6 inches with a 1/2 inch hole to 1 an arbor. Two sections of 20-ply are required to make the whee 1/2 inch thick.

	Weight	Code		910
No. 1521	34 16.	DOGAT	2-20 ply sections	\$1.20
No. 1721 Stitched	1/4 lb.	DOGON	2-20 ply sections	1.4
	Packed 2-20	ply sections in	an envelope	

NO. 1522 CARBON REMOVING BRUSH

Very useful in removing carbon from cylinder heads, tops of pistons, valve ports, etc. Leaves fine burnished surface upon which it is hard for carbon to collect.

Diameter of brush, 11/4 inches. Length of wire, 11/8 inches. Spindle, 1/4 inch diameter. Can be used in any 1/4 inch electric drill.

No. 1522

1/4 lb.

DOGUR

\$1.4

Packed one in a box



The broad assortment of accessories illustrated and described on the next three pages multiplies many times the utility and pleasure to be derived from a variety of power workshop tools.

Some are for use in the live or tailstock spindles of lathes, some on the taper arbors of drill presses and others on the shafts of motors or any driven shaft ½ or ½ inch in diameter, either plain round or threaded ½ inch 20 thread. No. 986 can be used in the chuck of ¼ inch drills for driving grinding wheels, wire or fibre brushes and buffing wheels. In the same way No. 992 can be used in an electric drill for polishing and sanding.

Taper shanks and sockets precision ground as are point centers. Parts hardened and tempered

SPUR CENTERS



Sharp spurs and hardened points insure positive drive for hard or soft wood and other non-metallic materials. Points are replaceable. Hardened, precision ground Morse Taper Shanks.

	Shork	Diam. Head	Weight	Price end
No. 920	No. 0 M.T.	1/2"	1 1/2 ozs.	\$0.80
No. 922	No. 1 M.T.	3/4"	2 1/2 025	.90
No. 924	No. 2 M.T	1."	51/2 023.	.95

SPUR CENTERS



Sharp, hardened points are replaceable. Four spurs insure positive drive in hard and soft mood and non-metallic materials. Shanks accurately bored to fit ½ inch or ¾ inch round arbors. Two set screws.

	Fits Arbor	Diam, Head	Weight	Price each
No. 917 No. 918	1/2"	34"	5 ozs.	\$1.00
418	56"	3/4"	5 ozs.	1.00

CROTCH CENTER



For centering round and square stock for drilling. Accurately milled 90° crotch. Precision ground Morse Taper Shank.

M	Shank I	Non Head	Weight	Price each
No. 938	No. 2 M.T.	2*	17 ozs.	\$1.60

CUP CENTERS



Deep machined cups with sharp rims. The keen, hardened points are replaceable. Precision ground Morse Taper Shanks.

	Shark	Diam. Head Weight	Price each
No. 910	No. 0 M.T.	1/2" 1 1/2 ozs.	\$0.75
No. 912	No. 1 M.T.	3/4" 2 1/2 ozs.	.80
No. 914	No. 2 M.T.	34" 5 1/2 ozs.	.95

CUP CENTERS



Sharp, hardened points are replaceable. Diameter of cups 1/4 inch. Shanks accurately bored to fit 1/2 inch and 1/4 inch round arbors.

		Fits Arbor	Dism. Head	Weight	Frice each
No.	915	1/2"	36"	5 021	\$1.00
No.	916	36"	3/4"	5 ozs.	1.00

SCREW FACE PLATES



For holding small blocks of non-metallic materials. Hardened screws. Plate 1¾ inches and 2 inches in diameter. Precision ground Morse Taper Shanks.

		Shank	Diam. Plate	Weight	Price each
No.	940	No. 1 M.T.	1.34	5 ozs.	\$1.60
No.	942	No. 2 M.T.	2 *	11 ors.	1.60



FACE PLATE



Heavy 1/2 inch plate, 3 inches in diameter bored so spurs can be set at two diameters, 111/16 inches or 21/16 inches. Center threaded for either the hardened point or screw center regularly Two hardened spurs also regular equipment. Back threaded to fit 3/4 inch-16T Arbor.

No. 926

Fits Arbor Diam, Plate Weight 34"-16T

3" 21 ozs. Price each \$2.00

TAPER ADAPTER



For adapting tools with No. 2 Morse Taper Shanks to drill presses with No. 33 Jacobs Arbors. An accurately bored No. 2 M.T. socket in one end and a No. 33 Jacobs Arbor in the other. Fine ground finish.

Adoph

Weight 8 025

\$2.60

No. 982 No. 2 M. T. to No. 33J SHAPER CUTTER ADAPTER



For using shaper cutters with holes % inch in diameter with 18 threads. Hardened left-hand lock screw. Shank accurately bored to fit a No. 33 Jacobs Arbor. Drift pin included.

No. 980 1/4 -181 No. 33 Jacobs 51/2 azs. \$1.50

For Cutters Fits Arbor

Weight

SHAPER CUTTER ADAPTER



For shaper cutters with 1/2 inch holes. Maximum thickness of cutter 11/4 inches. Shank accurately bored to fit a No. 33 Jacobs Taper Arbor. Drift pin included.

For Cetters Fits Arbor Weight Price each No. 978 1/2" Hole No. 33 Jacobs 51/2 ozs. \$1.40

DRILL PAD



Face of pad accurately ground at right angles to the shank. Pad diameter 31/16 inches. Precision ground Morse Taper Shank.

No. 960 No. 2 M.T.

Diam Fad Weight 334" 21 ors

MORSE TAPER ADAPTER SLEEVE



A precision ground No. 2 Morse Taper Shank with a No. 1 Morse Taper Socket accurately bored in it. Makes it possible to use No. 1 Shanks in No. 2 Socket.

No. 944 No. 1 to No. 2 M.T.

3 1/2 ozs.

WHEEL ARBOR



For operating grinding and buffing wheek wire and fibre brushes, etc., with 1/2 inch holes Shank 1/4 inch in diameter can be used in any three-jawed chuck of 1/4 inch or larger capacity Maximum distance between the 11/4 inch flanges is 1 inch. Arbor threaded 1/2 inch-201.

No. 986

Weight 5 ozs

\$0.65

SHAPER COLLARS



Set consists of six collars for use on 1/2 inch shape spindles. Outside diameters 19/12, 34, 1, 11/2 and 13/4 inches.

No. 976

Fin Spindle

Weight 4 1/2 025. \$2.00



60° POINT CENTERS



Fiardened, precision ground 60° centers with precision ground Morse Taper Shanks for use a tailstocks.

	Shank	Weight	Frice each
No. 928	No. 0 M.T.	1 1/2 ozs.	\$0.65
No. 930	No. 1 M.T.	2 ozs.	.75
No. 932	No. 2 M.T.	5 ozs.	.80

COLLET CHUCK



Ouck has ½ inch capacity and is regularly supplied with one ¼ inch collet. Shank is accurately bored to fit a No. 33 Jacobs Taper Arbar. Drift pin for removal from arbor included.

No. 984 1/2" No. 33 Jacobs S azs. \$1.50

WORK ARBORS



For operating grinding, polishing, wire brush, buffing wheels, sanding drums, etc., with ½ inch toles. Maximum capacity between the 2 inch diameter flanges is 2¼ inches. Spindle is ½ inch in diameter with 20 threads per inch. Shanks accurately bored to fit round arbors. Two set strews.

	Fits Arbor	Weight	Price each
No. 956	1/2"	11 ozs.	\$0.80
No. 958	36"	12 ozs.	.80

CHUCKS WITH ROUND SOCKETS



Smooth operating ½ inch capacity chuck with three hardened, spring activated jaws for holding round shanks, drills and rods. Chuck backs threaded ½ inch-20T. Sockets accurately bored for round shanks.

No. 970	Copacity O to 1/2"	Fits Arbor	Weight 16 ozs.	\$1.50
77.2	0 to 1/2"	7%	17 025.	1.50

60° BALL BEARING POINT CENTERS



Ball bearing 60° centers, hardened and precision ground concentric with the precision ground Morse Taper Shanks.

	Shank	Weight	Frice each
No. 934	No. 1 M.T.	7 ozs.	\$3.20
No. 936	No. 2 M.T.	10 ozs.	3.20

COLLET CHUCKS



Made in two sizes, ¼ inch and ½ inch respectively. Back threaded to fit an arbor ½ inch in diameter with 20 threads.

	Copocity	Fits Arbor	Weight	Price each
No. 974	14"	1/2"-20T	31/2 021	\$1.05
No. 990	3/2"	1/2"-20T	12 023	1.30

DRILL CHUCKS



Finely knurled shells with three hardened, spring actuated jaws for holding all drills or rods within their capacity. Back threaded to fit on ½ inch-20 thread spindles. No. 968 is chrome plated and has a spanner wrench.

	Copocity	Ets Arbor	Weight	Frice each
No. 988	0 to 1/4"	1/2"-20T	5 ozs	\$0.55
No. 966	0 to 1/2"	1/2"-20T	11 ozs.	.90
No. 968	0 to 1/2"	1/2"-20T	12 ozs.	1,30

CHUCKS WITH MORSE TAPER SHANKS



A smooth-acting chuck with three hardened, spring activated jaws for holding round shanks, drills and rods from 0 to ½ inch in diameter. Precision ground Morse Taper Shanks.

	Chuck Capacity	Shorks	Weight	Price each
No. 962	0 to 1/2"	No. 1 M.T.	15 ozs.	\$2.20
No. 964	0 to 1/2"	No. 2 M.T.	18 ozs.	2.20



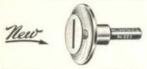
WORK ARBORS WITH CHUCKS



A useful combination of a 1/2 inch capacity threejawed chuck and an arbor for grinding wheels, buffs and brushes with 1/2 inch hole. Maximum distance between the 2 inch flanges is 21/4 inches with chuck removed, 1/8 inch with chuck closed. Chuck back threaded 1/2 inch-20T. accurately bored to fit round arbors.

	Fits Arthors	Weight	Price each
No. 946	3/2"	22 ozs.	\$1.65
No. 948	3/4"	21 ozs.	1.65

ABRASIVE DISC HOLDER



For driving paper and cloth abrasive discs for grinding, polishing and sanding. Anchor screw holds discs securely without protruding beyond the face of the disc. Has 1/4 inch round shank for use in three-jawed chucks.

	Cop. Disc	Shork	Weight	Price each
No. 992	4 to 6"	1/4" Rd.	2 023.	\$0.70

WORK ARBORS FOR MORSE TAPER SOCKETS



Work arbors accommodate grinding and buffine

wheels, wire brushes, etc., with 1/2 inch holes Maximum capacity between the 2 inch dian eter flanges is 11/4 inches. Arbor threaded 1/2 inch-20T. Precision ground Morse Taper Shanks.

	Shank	Weight	Price end
No. 950	No. 0 M.T.	8 ozs.	\$1.05
No. 952	No. 1 M.T.	9 1/2 ozs.	1.10
No. 954	No. 2 M.T.	12 ozs.	1.15

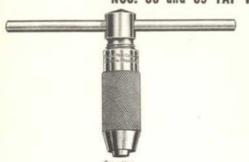
ABRASIVE DISC HOLDER



Anchor screw holds 6 to 8 inch abrasive dist securely for grinding, polishing and sanding operations. Shank accurately bored to fit 5 1/2 inch-20T threaded arbor.

	Cop. Disc	Fits Arbor	Weight	Price est
No. 994	6 to 8"	1/2"-20T	5 ors.	\$1.00

NOS. 88 and 89 TAP WRENCHES



Designed for securely holding tops reamers, and other tools with squatt shanks that must be operated by hand The handles are permanently fixed the solid steel body. The chuck shell long and nicely knurled to provide powerful clamping action on the care fully heat-treated steel jaws. Jawl are self-opening.

Entire tool nicely polished.

No.	88
No.	89

Hand Top 3/4-3/4" 1/2-1/2"

0-14 7-20

Machine Top Packed one in a box

41/2"

Weight 3 1/2 ozs. 4 1/2 021

YATPO

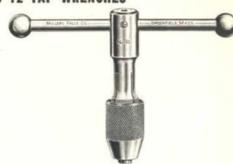
Price and \$0.95 1.25

80



NOS. 10 to 12 TAP WRENCHES

These tools are designed for accurately centering and holding taps, reamers, small drills or other small tools. They are provided with adjustable handles with hall ends which may be slipped to the extreme left or right when greater leverage is desired or when the work is in close quarters. The set screw, illustrated, locks the handle at any desired position. The chuck shells are nicely knurled. The four jaws are carefully hardened and tempered and the sleeve case hardened.



		ocities		400		
	Hand Top	Mochine Top	Handle	Weight	Code	Price each
No. 10	5%-54°	0-14	31/4"	2 ozs.	NAVAL	\$1.00
No. 11	Va- 9/2"	0.16	4 3/4"	4 ozs.	NAVEW	1.25
No. 12		14-20	51/4"	8 023.	NAVIC	1.80
No. 112	Set of one each Nos.	10, 11 and 12		18 ozs.	NAVVY	4.30
		1 10 1 12		10.		

10 and 11 packed six and No. 12 two in a box No. 112 one set in a box

NO. 3 HAND VISE

A powerful, efficient vise with a comfortable handle. Jaws and handles made of semi-steel. Jaw faces are nicely checked and provide a sure grip when tightened by means of the large steel thumb nut and screw bolt. The entire tool is nickel plated.

	Length	Width Jaws	Weight	Code	Frice each
No. 3	5*	11/2"	1 lb.	REAKS	\$2.90
		Darked as	in the se has		

NO. 217 VISE



An extremely handy vise for holding a great variety of work on a bench drill or drill press bed or on the work bench. The fixed and movable laws have parallel faces. A removable swivel jaw is also provided. Each base rail has two holes tapped 3/4 inch-20 for fastening to bed or bench. A hand screw for damping to a bed is provided. laws, sides, base and bearing surfaces accurately machined, All

other faces black enameled. Clamp screw polished.

Maximum Capacity No. 217 3 1/4"

Width Jaws 234"

Weight 4 1/2 lbs. Packed one in a box

Code DEIGN \$6.20



NOS. 663-664 BENCH VISES

Rigid Twin Guide Rod Construction

The twin guide rod construction of these vises was originated by Goodell-Pratt and marked a big advance in vise construction,

They are operated by an accurately cut-steel feed screw. Two steel guide rods are provided to insure rigidity. All parts are carefully fitted so that the jaws are easily operated, but without lost motion. After the vise is completely assembled, the jaws are machined so that they will meet accurately. Clamp to bench up to and including 2 inches thick.

All steel parts are polished and all iron parts are finished in black enamel.

	Width Joys	Javs Open	Weight	Code	Frice each
No. 663	13/5"	1 1/2"	2 1/4 lbs.	ZAGIT	\$2.80
No. 664	21/2"	21/2"	8 lbs.	ZAGOV	5.20
		Dest of	and the same of the same		





NOS. 161-1700 BENCH VISES

Rigid Twin Guide Rod Construction

These vises are similar to those above but not so fine a finish. The twin guide rod construction insures smooth action and rigidity of the movable jaw. Jaws milled parallel after the vise has been assembled. Small anvil on body casting. Body and movable jaws black enameled. All exposed steel path polished. Clamp to bench up to and including 2 inches this.

	Width Jows	Jaws Open	Weight	Code	Price and
No. 161	2 "	2 *	3 % lbs.	YEGCA	\$2.50
No. 1700	21/5"	21/4"	4 lbs	YEGLO	2.60
		Packed on	e in a box		

NO. 18 SWIVEL VISE

Swivel Base. Twin Guide Rods

This vise is similar to No. 1700 above with the addition of a swivel base which permits the jaws to be swung to any desired angle. The swivel clamping mechanism is controlled by a small steel level at the right. Twin guide rod construction gives smooth action and rigidity. Jaws 2½ inches wide are milled after vise is assembled for close fitting. Clamps to bench up to and including 2 inches thick.

Body finished in red enamel. Movable jaw in black enamel.

No. 18	Width Joses 2 1/2"	Jawa Open 2 1/4 *	Weight 5 % lbs.	YEGMA	\$3.80
		Parked one	in a how		





DRILL CHUCKS



Straight Round Shanks

This chuck was originated by Goodell-Pratt over 40 years ago and has been supplied as regular equipment on millions of our hand and breast drills. It has been supplied in tremendous quantities to manufacturers as regular equipment on a wide variety of products. In every instance performance has been highly satisfactory.

Made entirely of steel with carefully hardened and tempered jaws actuated by three small coil springs. The shanks are carefully fitted to, and tested with, the chuck with which they are shipped. This and the care used throughout manufacture accounts for the high standard of trueness maintained at the very moderate prices at which they are offered.

These chucks can be easily tightened or loosened by hand. No spanner or wrench is required. The chuck shell is nicely knurled affording a positive and comfortable grip. The shanks are lathe ground to 1/2 inch diameter. Shell, back and shank nicely polished.

	Copocity	Shell Digmeter	Weight	Code	Price auch
No. 15	0 to 1/4"	1 .	3/6 lb.	WYNUS	\$2.10
No. 15 1/2	0 to 3/s"	7.5%	% lb.	WYPOS	2.60
No. 16	0 to 1/2"	1 1/2"	7/a lb.	WYROV	3.40

Without Shanks

These are the same chucks listed above but without shanks.

	Coposity	Bock Threaded	Weight	Code	Price each
No. 15	0 to 1/4"	%" (.443) 26NS	1/4 lb.	WEBAL	\$1.50
No. 15 1/2	0 to 34"	19/2" (.467) 24NS	1/2 lb	WEBEN	2.00
No. 16	0 to 1/2"	%s" (.560) 24NS	5/6 lb.	WEBIT	2.60
		Out of the first first	20		

CHUCKS WITH MORSE TAPER SHANK



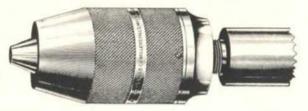
These drill chucks are identical to those listed above but are fitted with precision ground, No. 1 or No. 2, Morse Taper Shanks.

In ordering, please be sure and specify size shank desired.

		39	*+g01		
220	Corposity	No. 1 M.T.	No. 2 M.T.	Code	Price each
No. 15 M.T.	0 to 34"	34.1b.	1/2 lb.	WYORV	\$3.10
190-1516M T	0 to 1/s"	1/4 lb.	3/4 lb.	WYRIT -	3.70
No. 16 M.T.	0 to 1/2"	₹ lb.	1 lb.	WYSET	4.80
		Description of the	and the same of the same		



MILLERS FALLS DRILL CHUCKS



These chucks have been used for years on Millers Falls Hand and Breast Drills, with complete satisfact to the user. They are fitted with ar without plain round shanks and hold round shank drills within the capacity securely and with surprising accuracy for the low price at which they are sold. Manufacture interested in chucks in large quantities for equipment purposes are requested to ask for special, larguantity prices.

They are made entirely of steel with three hardened jaws actuated by concealed springs to cannot be damaged from without. The shells are nicely knurled to give a good grip for tighteniand loosening.

The chucks listed below are regularly equipped with 1/2 inch round shanks 21/2 inches long.

	Copacity	Shell Digmeter	Weight	Code	Frue e
No. 5	0 to 1/4"	1.5	1/2 lb.	EARLY	\$2.
No. 6	0 to 36"	1.54	34 lb.	EADEL	3.
No. 7	0 to 1/2"	11/2"	1 1/a flos	EAGLE	4.3

Furnished with flattened shank for set screw without extra charge.

Without Shanks

These are the same chucks listed above but without shanks.

	Cessochy	Shell Dumeter	Backs Threaded	Weight	Code	Friend
No. 5	0 to 1/4"	1	%" (.432) 22NS	1/4 Hb:	EARSH	52.
No. 6	0 to 1/4"	1 1/4"	%" (.432) 22N5	1/2 lb.	EASTR	2
No. 7	0 to 1/2"	11/2*	%" (.560) 24NS	% lb.	EAVES	3.4

NO. 153 BREAST DRILL CHUCK



This chuck is interchangeable with the three-jawed chucks found on any Millers Falls or Goodell-Pris Breast Drill. It is of the Universal type holding 1/2 inch round shank drills, square bit brace shan or No. 1 Morse Taper Shanks.

Nicely polished and knurled.

	Section and Assessed	many limited that	THE BUILDING	5.008	8 1 1 1 1 1
No. 153	Universal	% (.560) 24NS	1/2 lb.	DILAT	527

HACK SAWS

Miller Salido Color Colo

MILLERS FALLS
TOOLS
SINCE
[868]



"BLU-MOL TENSIOMETER""





U. S. Potent 2,337,629, others pending Applies Floating Tension to Blades in Operation

Tension always has been recognized as essential to the best performance of hack saw blades. **Mow much tension was necessary for the best performance of a given size blade has been, in the past, a matter of pure guess. Naturally, therefore, a precise method or device for applying tension of so many pounds per square inch was unknown.

In developing "BLU-MOL" and "JET-EDGE" Blades, which involved hundreds of exhaustive performance tests in which the importance of the right tension on any blade was found to be one of the key factors to efficient performance, the Millers Falls Company determined to get the facts and produce a device that would apply the critical tension to a blade and maintain that tension continuously while the blade is in use.

The "BLU-MOL TENSIOMETER," a steel cylinder containing a heavy, precisely calibrated steel spring, is the result. It is installed quickly and easily on any of the better known hack saw machines because it screws directly onto the blade holder in place of the original tightening nut. A graduated index shows at a glance the exact number of pounds tension on the blade as the Tensiometer is turned on. It is equipped with a heavy, roller thrust bearing in its base so that tightening is extremely easy. A preloading device is incorporated so that only a turn or two is required for any tension up to 4,000 pounds.

In action the blade floats on the Tensiometer spring. By absorbing blade elongation caused by frictional heat or distortion of the eyes, the initial tension is continuously maintained within very dast limits without attention from the operator. Blade life is greatly extended as any unusual shock of strain on the blade is immediately absorbed by the spring thereby minimizing breakage which is costly and at the same time adding a very worth-while safety factor.

With critical tensions worked out to a nicety and the "BLU-MOL TENSIOMETER" to apply the with, the overall efficiency of any hack saw blade can be greatly increased, the performance improved and large savings made.

"Millers Falls" and "Universal" Distributors will gladly furnish additional information about "floating tension" and what it means to you and also arrange for a demonstration on your own machines without any obligation whatsoever. Write us for the name of the distributor nearest you.

For the proper tension on various sizes of blades see page 90.



HACK SAW BLADES

willers Falls Company manufactures the broadest and finest line of hack saw blades in the world. Every step in their production from the selection of the alloy steels from which they are made, the machining and setting of the teeth and particularly the heat treatment employs the most modern methods, equipment and controls. They are conceived and made as high grade cutting tools that must deliver superior performance under widely varying and, in many instances, adverse conditions.





They are made in two brands of identical quality under the trade names "Millers Falls" and "Universal." The two registered trademarks appear above.

No matter which brand a distributor may offer it can be accepted with confidence and the utmost assurance that its performance cannot be excelled.

SELECTION OF HAND BLADES

Hand blade performance depends very largely on the selection of the proper blade for the particular arting to be done. The proper type of blade and the number of teeth per inch or pitch deserve coreful consideration.

Type of Blade — Cutting in drill rod, mild steels, non-ferrous metals and softer materials can be safely entrusted to Tuf-Flex or Standard Steel Blades. When the cutting is in the hard alloy steels such as "anganese, chrome-nickel, stainless, etc., a high speed type such as "Blu-Mol," "Blu-Flex" or "Tungsten tigh Speed" should be chosen.

Number of Teeth per inch — In general, coarse teeth should be used on large sections particularly when cutting mild steels, cast iron, non-ferrous metals and all softer materials where ample thip clearence is needed. When the sections are smaller a finer tooth should be used. The finest teeth should be used in cutting very thin sections. The following table makes it quite simple to select the number of teeth that will give the best performance on a variety of materials.

FRO	Kind or Shape of Material						
14 Teeth	Large Sections Over 1" Diameters	Aluminum Angle Iran Asbestos Babbitt	Brass Branze Cast Iron Channels	Copper Hard Rubber I Beams Mild Steel	Plastics Rail, etc.		
18 Teeth	Medium Sections Less than 1" Diameters	Alloy Steels Angle Iron	Armored Cable Cast Iron	Channels Drill Rad	Mild Steel Tool Steel		
24 Teeth	Thin Sections Less than ¼ * Diameters	Alloy Steels Angle Iron BX	Cable Conduit Channels	Heavy Sheets Pipe Tubing	Wire Rope		
32 Teeth	Very Thin Sections	Angle Iron BX	Cable Channels	Gutter Pipe Mouldings	Pipe Tubing		

Operation — A well built frame with an ample tensioning device and sufficiently rigid to keep the blade in good alignment is essential to prevent unnecessary blade breakage. If possible the work should be held rigidly in a vise—if not it is advisable to use a flexible blade. Use care in starting the aut. Do not cut into a corner. Angle the starting cut so as to avoid any undue shock to a single tooth. A light, steady stroke should be used until cut is well started, then use long, steady strokes with sufficient pressure to keep the teeth cutting. Blades will wear out quickly if they are allowed to slip over the cut or are dragged over it on the recovery stroke. Blades will last much longer if properly labricated when cutting all types of steel.



HAND HACK SAW DISPLAY UNITS

The three display units listed below, consisting of a display fixture and a very moderate quantity of carefully balanced pitches of 10 and 12 inch blades, will increase the sales of hand hack saws again and again. The display fixtures are entirely free. They are substantially made of wood and



pressed wood panels nicely finished and silk screened in three colors: one combination of colors for the new Blu-Flex Blade, on for Tuf-Flex and one for Blu-Mol. The list price of the complete unit is the standard list price of the blades only. These display require less than one half square foot of counter space and will make it highly profitable.

Hew

NO. 550 TUF-FLEX UNIT

Super-Tough Special Alloy Super-Flexible

Display unit finished in red, black and gold. The assortment of Tuf-Flex Blades (see following page) is as follows:

20 No. 53FH 10" - 18T	20 No. 55FH 12" - 18T
20 No. 63FH 10" - 24T	20 No. 65FH 12" - 24T
10 No. 73FH 10" - 32T	10 No. 75FH 12" - 32T

No. 550 Tuf-Flex Display Unit Complete

Packed one unit in a cartan Weight 41/2 lbs.

NO. 1112 BLU-MOL UNIT

High Speed All Hard

Display unit finished in blue, red and gold. The assortment of Blu-Mol High Speed Blades (see page 91) is as follows:

10 No. 1018M 10" — 18T 10 No. 1024M 10" — 24T 10 No. 1218M 12" - 18T 10 No. 1224M 12" - 24T 5 No. 1032M 10" - 32T

5 No. 1232M 12" - 32T

No. 1112 Blu-Mol Display Unit Complete Packed one unit in a carton Weight 21/2 lbs.

\$17.60







\$8.83

\$17.6

NO. 2222 BLU-FLEX UNIT

High Speed Flexible

Display unit finished blue, black and gold. The assorting of Blu-Flex Blades (see next page) is as follows:

10 No. 10188F 10" -- 18T 10 No. 12188F 12" - 18T 10 No. 1224BF 12" - 24T 10 No. 10248F 10" - 24T 5 No. 12328F 12" - 321 5 No. 10328F 10" - 32T

No. 2222 Blu-Flex Display Unit Complete

Packed one unit in a carton Weight 21/2 lbs.

For ordering replacement stock for these displays see pages 89 and 91



MILLERS FALLS

STANDARD STEEL

STANDARD STEEL ALL HARD

High grade blades made of standard analysis of tungsten alloy steel with an exact and uniform teatment which makes them economical to use in mild steels, non-ferrous metals, etc.

They are made in two types: All Hard for work rigidly held, and Flexible for work away from the seeth or in the hands of unskilled operators.

unda	in Hand	Sizes only		ALL HA	ARD		Packed 10	O in a box
Mode	MINISTER STATE		Order by Numbers Below	Irder by Numbers Below		Weight	Dist Price	
(ength	Width	Thickness	14	Teeth	pier inch 24	32	per box 100	per 100
10	1/2 1/2	.025 .025	5A	13 15A	23 25A	33 35A	3 % 4 %	\$8.00 9.60
-				FLEXIS	BLE			
10	1/2 1/2	.025 .025	45A	53 55A	63 65A	73 75A	3 % 4 %	\$8.00 9.60

14T and 18T Blades Standard Set. 24T and 32T Wavy Set.

"TUF-FLEX" SPECIAL ALLOY

U. S. Potent No. 2,252,869 The finest of all general purpose saws

An entirely new type of flexible saw made of a patented special alloy steel. It is super-flexible, sper-fough—practically unbreakable in use. The teeth will not strip when cutting even the lightest thing, pipe or thinnest sheets.

It cuts drill rod and alloy steels that ordinary flexible blades cannot master. It takes mild steels and non-ferrous metals in its stride.

Made in Hand Sizes only

Packed 100 in a box

				Order by No	mbers Below		Weight	List Price
Tengen !	Wide	Thickness		Teeth s	per inch		perbas	100
-			14	18	24	32	100	
10	1/2	.025		53FH	63FH	73FH	3.5%	\$8.00
12	1/2	.025	45FH	55FH	65FH	75FH	4 1/4	9.60

41 and 18T Blades Standard Set. 24T and 32T Wavy Set.

"BLU-FLEX"" HIGH SPEED



New Flexible, High Speed Blade

This remarkable new blade, made of fine quality, high speed molybdenum steel, cuts the cost of hand sawing hard alloy steels to the core and is so flexible that it is unbreakable in use. The high cost of breakage is entirely eliminated and 100% of the cutting value of the blade is assured.

The unique heat treatment provides a hard cutting edge and a soft, tough back. Cutting performance is equal in every way to an all hard blade.

-wae	in Hand	Sizes only					Packed 10	00 in a box
the contract of			,	Order by Nun	shers Below		Weight	List Price
- Andrew	Widn	Thickness	Teeth per inch			32	per box 100	per 100
10	1/2	.025	14	1018BF	10248F	1032BF	3 1/4	\$32.00
12	1/2	025	1214BF	1218BF	1224BF	1232BF	41/2	38.40
141 One	d 18T Blas	des Standare	Set. 24T and	321 Wavy Set.				



SUGGESTIONS FOR SELECTION AND OPERATION POWER HACK SAWS

The selection and proper use of a power hack saw blade to cut the greatest amount of material smoothly and accurately at the lowest cost involves a number of important factors all of which must have careful consideration.

The length of the blade is, of course, determined by the size of the machine. Width and thickness depend on the size of the machine, the size and shape of the sections being cut and the feed to be used. The most efficient pitch—teeth per inch—depends on the kind of material being cut, its size and shape. Use four and six teeth for production cutting of large to medium solid sections—the former as softer, free-cutting materials where plenty of chip clearance is needed between teeth and the latter on harder materials. Use 10 teeth on very hard materials, small sections and structural shapes and pipe. In sizes where available, 14 teeth are best for small solid sections or bars, light angle iron, pipe and tubing.

In operation the blade must be tensioned properly if it is to cut true and perform its best. The cutting speed—strokes per minute—must take into consideration the kind of material being cut, the type of blade chosen and production requirements. For proper feed—pressure on the blade—which varies for different sizes and kinds of material and the size and type of blade used, the recommendation of the manufacturer of the machine should be followed.

For general recommendations of critical tensions, cutting speeds and pitches, follow the tables below or submit full details to us.

PITCHES AND SPEEDS FOR POWER HACK SAW RIADES

Material	Teeth per inch	Strokes per minute	Material	Teethr per inch	Sealer per mod
Alloy Steel	4-6	60-90	High Speed Steels	4-6	60-90
Aluminum Alloys	4-6	100-125	Machinery Steel	4-6	125
Aluminum, Pure	4-6	100-125	Malleable Iron	6-10	90-17
Brass Castings, Soft	6-10	125-150	Manganese Bronze	6-10	60
Brass Costings, Hard	6-10	100-125	Nickel Chromium Alloys	6-10	60
Bronze Castings	6-10	100-125	Pipe, Iron	10-14	125
Cast Iron	4-6-10	100-125	Rails	6-10	60-90
Copper	4-6	100-125	Stainless Steel	4-6	60
Carbon Tool Steel	6-10	90	Structural Steel	6-10	90-12
Cold Rolled Steel	4-6	125	Tubing, Thick Wall	6-10	120
Die Blocks	4-6	60-90	Tubing, Thin Wall	14	120
Drill Rod	10-14	90	Tablings Tilli Cr Gil	14	1445

Use cutting compound on all of the above materials except Cast Iron

TENSION IN POUNDS PER SQUARE INCH FOR POWER BLADES

The following table of correct tension for given sizes of blades was determined for Millers Fall by the Massachusetts Institute of Technology in conjunction with the development of Blu-Mol and Jet-Edge Blades and the Blu-Mol Tensiometer. See page 86 on "Floating Tension" and how it also be applied.

Blade	Thickness	Blu-Mol Jet-Edge	Blu-Mo
Width		Tungsten High Speed	Dooble Life
%" 1 " 1 ¼" 1 ½" 2 " 2 ½"	.032 .049065 .065 .072 .085100	350 lbs. 1500 lbs. 2100 lbs. 2600 lbs. 3000 lbs. 3500 lbs.	2100 to 2600 to 2800 to 3200 to



"BLU-MOL" HIGH SPEED

Mol Blades, made from one of the finest high speed, molybdenum alloy steels, have earned an emiable reputation for low cost performance. The exact, closely controlled heat treatment gives a sard, abrasion resistant cutting edge that guarantees more cutting per blade than any blade of type.

Biu-Mol Blades cut fast and cut true. Their uniformly fine performance in both hard alloy and mild deels and many other materials makes it the most economical blade for general, all purpose use. It is a blade that it pays well to become intimately acquainted with.



No.7506 M 17" x 114" x .065-61

0)

Superior High Speed Performance

HAND SIZES

Packed 100 in a box

		Thickness		Weight	List Price			
70	Width		14		umbers Below per lich 24	32	per box 100	per 100
10	1/2 1/2	.025	1214M	1018M 1218M	1024M 1224M	1032M 1232M	3 % 4 %	\$32.00 38.40

4T and 18T Blades Standard Set. 24T and 32T Wavy Set.

POWER SIZES

Packed 10 in a box

				Ord	er by Numbers Be	low		Weight	List Price	
mpt.	Wights	Thickness	4	6	Teeth per inch 10	14	18	per box	per blode	
12 12 12	1 %	.032				1254M 2414M	1258M	3% 1 3%	\$0.64	
-		.065			2410M			2.3%	1.02	
14 14 14	1 1 1 1/4 1 1/5	.049 .065 .065 .072	4504M 4604M	4506M 4606M	1410M 4410M 4510M	4414M		2 1/4 2 3/4 3 1/5 4 3/4	1.19 1.19 1.49 1.97	
17 17 17	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	.049 .065 .065	7504M	7506M	7410M 7510M	7414M		2 34 3 34 4	1.45 1.45 1.81	
18 18 18	1 1 1/4 1 1/2 2	.065 .065 .072 .085	8504M 8604M 8884M	8506M 8606M 8886M	8410M 8510M			3 1/2 4 1/4 5 1/2 9 3/6	1.53 1.92 2.53 3.98	
21	2	.085	1884M	1886M				1034	4.65	
24	2 2	.085	4884M 4814M	4886M 254" Hole				12 % 14 ½	5.31	
20	21/2	.100	3114M	2%4" Hole				22 %	9.57	

 90 es .032 inch have $\frac{4}{16}$ inch holes, all blades .049 to .085 inch inclusive have $\frac{4}{16}$ inch holes and all blades .100 inch save $\frac{4}{16}$ inch holes.



"BLU-MOL®" DOUBLE-LIFE

This remarkable blade is highly recommended for use in any plant where hadesawing operations and personnel are under careful supervision. Under such conditions it is capable of giving the lowest oper cut of any blade made. It is showing large savings for the many metal working plants which have adopted it.

"Double-Life" is made of one solid piece of fine, high speed, molybdenum steel with teeth out is both edges. The entire blade is painstakingly heat-treated to produce hard cutting edges. The center is then electrically annealed by a special process to produce a softer, very tough zone be entire length of the blade including the eyes, thus reducing breakage to a minimum.

The two cutting edges have a differential set. The first cut edge is set a few thousandths of a inch wider than the second cut edge allowing the second cut edge to follow the kerf of the former without any wear.

"Double-Life" with its two cutting edges gives twice the cutting value of a single edge blade to less than one third more.

	BLU-MOL	III USE THIS EDGE FIRST III	No. DL 1884 21"X2"X.065"-41"	(
)	1222 DOUBLE-LIFE	111 USE THIS EDGE FIRST 111	21"X2"X.065"~41"	

High Speed Double Edge

Made in Power Sizes only

New Pocked 10 in a bo

				Order by No	nbers Below		Weight	Side Prior
Length	Width	Thickness		Teeth p	er inch 10	14	box 10	per blok
			4	6	10.	.14	10	-
12	1	.049				DL2414	2 1/2	\$1.3
12	1	.065			DL2410		2 1/1	1.3
14	1	.049				DL4414	234	1.5 1.5 1.5 2.5
14	1	.065			DL4410		2 ¾ 3 ¾	1.0
14	1 1/4	.065	DL4504	DL4506	DL4510		4 1/4	1.7
14	1 1/2	.072	DL4604	DL4606			5	-
17	11/4	.065	DL7504	DL7506	DL7510		4 1/2	2
18	11/4	.065	DL8504	DL8506	DL8510		5	2/ 3/ 5/
18	1 1/2	.072	DL8604	DL8606			63%	3.4
18	2	.085	DL8884	DL8886			101/4	2
21	2	.085	DL1884	DL1886			12 1/4	6.0
24	2 2	.085	DL4884	DL4886			141/4	6.1
24	2	.100	DL4814	134" Hole			16	1.

All blades .049 to .085 inch inclusive have 1/2 inch holes and all blades .100 inch thick have 1/4 inch holes



"JET-EDGE"" POWER BLADES

Never in the thousands of tests to which "JET-EDGE" Blades have and are being subjected has a "JET-EDGE" Blade broken when operating at anything approaching normal speeds and feeds. This subreakability, proved in industry as well as in our laboratory, is highly important. First it makes your backsawing safer and secondly it insures getting the last cents worth of cutting value from every blade.

"JET-EDGE" is the newest development and most sensational performer in the field. The cutting edge is a strip of super, high speed steel electrically welded to an extremely tough alloy steel back. This back absorbs the stresses and strains encountered in even the severest of operations and makes "EFEPGE" unbreakable in use.

"ET-EDGE" has already been standardized by some of the largest users of hack saw blades in the country after exhaustive tests by their own production engineers. For safety, fast, clean cutting and accuracy they cannot be equalled.



No. 8884JE 18"x 2"-.085 - 4T

Super, High Speed Unbreakable Blades

Made in Power Sizes only

New

Packed 10 in a box

131	2000/2014			-				
				Order by Nu	mbers Below		Weight	List
leigh.	Width	Thickness		Teeth p	er inch		box	241
	17.000	(Nickress)	4	6	10	14	10	blode
12	310	.049				2414JE	2	\$1.20
12	1	.065			2410JE	241402	2 %	1.20
14	1	.049			1410JE	4414JE	21/4	1.40
14	1	.065			4410JE		3	1.40
14	11/4	.065	4504JE	4506JE	4510JE		3 %	1.75
14	11/2	.072	4604JE	4606JE	000000		5	2.31
17	1	.049				7414JE	2 1/4	1.70
17	- 1	.065			7410JE		3 1/2	1.70
17	134	.065	7504JE	7506JE	7510JE		4 1/2	2.13
18	1	.065			8410JE		3 %	1.80
8	134	.065	8504JE	8506JE	8510JE		4 34	2.25
8	116	.072	8604JE	8606JE	031032		6	2.97
	1 1/2	.085	8884JE	8886JE			934	4.68
21	2	.085	1884JE	1886JE			1136	5.46
14	2	006	4884JE	4886JE			14	6.24
14	2 2	.085	4814JE	134 Hole			1514	7.20
-		.100	481435	The Hole			1374	7.480
0	214	100	211415	250.7 Mala			27.34	11.25

All blades .049 to .085 inch inclusive have \$22 inch holes and all blades .100 inch thick have \$254 inch holes.



TUNGSTEN HIGH SPEED

The high speed steel from which these blades are made, a Tungsten 18-4-1 alloy, is particularly efficient in cutting highly abrasive materials such as stainless steel, monel metal, carbon tool steel chrome and chrome-nickel steels, etc.

With their well-known heat and wear resistant qualities they can be operated at normal feed and speeds in these materials cutting many square inches without undue dulling.

The keen teeth are precisely set. The hardness closely controlled and tested to assure uniformly high accuracy of cut and long-cutting life.



No.4604 14"×15"×.072"-4T

HAND SIZES

Packed 100 in a bar

				Order by N	embers Selow		Weight	Sier. Prior	
Langth	Width	Thickness			box	per			
Langer		1	14	18	24	32	100	100	
10	1/2	.025	EAVISO	1018	1024	1032	4	\$33.5	
12	3/2	.025	1214	1218	1224	1232	4 1/2	40.2	

14T and 18T Blades Standard Set. 24T and 32T Wavy Set.

POWER SIZES

Packed 10 in a bat

				Order by No	mbers below		Weight	Dir Pris
Length	Width	Thickness		Teeth p			per box	pe
-			4		10	14	10	240
12	1	.049				2414	2	\$1.
12	1	.065			2410		2 %	
14	1	.049			1410	4414	21/0	1/
14	1	.065			4410		2 1/8	1/
14	1 3/4	.065	4504	4506	4510		3 3%	1.
14	1 1/2	.072	4604	4606			4 34	2
17	1	.049				7414	2 1/2	1.
17	1	.065			7410		3 3%	2.
17	134	.065	7504	7506	7510		4 1/4	
18	1	.065			8410		3 %	1.
18	1 1/4	.065	8504	8506	8510		41/2	2. 2. 4.
18	13/2	.072	8604	8606			5 3/6	2.
18	2	.085	8884	8886			10	
21	2	.085	1884	1886			111/4	5
24	2	.085	4884	4886			131/6	6.
24	2	.100	4814	2564" Hole			15 3/4	1

All blades .049 to .085 inch inclusive have 1/2 inch holes and all blades .100 inch thick have 1/4 inch holes



"BLU-MOL" HOLE SAWS

High Speed Heavy Duty "Follow through" Type

These new and outstanding heavy duty, high speed hole saws are rugged gang cutting tools. They out holes, fast and clean, ½ to 4 ½ inches in diameter and up to 1 ½ inch thick in any machinable material such as hard and mild steels, aluminum, brass and bronze, plastics, iron or steel pipe, wood, etc. As the outside diameter of cut is slightly larger than the diameter of the body the saw follows completely through its own hole. This permits cutting through two or more walls or partitions.

The cutting edge is a specially selected high speed steel welded to a very tough alloy steel back which in turn is welded to the steel body which receives the mandrel that drives it.

These saws, using mandrels No. 5518 and No. 5540, can be used in any portable power tool equipped with a $\frac{1}{2}$ inch or larger chuck or can be used in radial drills, lathes, drill presses, etc.







CUTTING DEPTH 11/4"

HOLE SAWS

ALL SIZES - 6 TEETH PER INCH

Code: NOBAC

	Digmeter	Price		se Sizes		Digneter	Price	Fig	e Sizes
Hober	Sow	each	Pipe Top	Pipe Entrance	Number	Saw	each	Pipe Top	Pipe Entrance
510	3/6"	\$3,00			542	256*	\$5.30	21/2	
512	34"	3.00		3/4	544	2 3/4"	5.30	200	
514	2/4"	3.00	3/4	3/6 1/2	546	2 1/4"	5.30		
316	17	3.00	500	2.00	548	3"	5.30		21/2
518	156"	3.00	1	34	550	31/4"	5.30		
520	1.54	3.00			552	31/4"	5.30	3	
522	1 3/4"	3.00		1	554	3 36"	5.30		
524	13/2"	3.00	11/4	124	556	31/2"	5.30		
526	1.5%	3.00	1000		558	3.56"	7.00		3
528	1 34	4.00	11/2	1 1/4	560	3.34"	8.00	31/2	
530	1.76	4.00	1.00	91,9491	562	3 1/4"	8.50		
532	2"	4.00		1 1/2	564	4"	9.00		
233	25%	5,30		1000	566	43/4"	10.00		31/2
134	21/4"	5.30			568	41/4"	13.00		072
136	21/4"	5.30	2		570	4 3/6"	15.50		
538	234	5.30	1000		572	4 1/2"	18.00		4
40	21/2"	5.30		2					

MANDRELS WITH HIGH SPEED PILOT DRILLS

The four mandrels listed below for driving the No. 500 Series of Hole Saws are all equipped with 1/4 inch high speed pilot drills. A 12-inch extension is available.

No. 5514	Fitting Saws	Sharik	Weight	Code	Frice each
M 3514	Nos. 510-518	1/4 Rd.	1/4 16.	NOCAL	\$2.50
No. 5518	Nos. 510-518	710 Hex	1/4 lb.	NOCET	4.00
No. 5540	Nos. 520-572	7/16" Hex	% 1b.	NODIM	6.00
No. 5572	Nos. 520-572	3/s" Hex	34 lb.	NOFOX	6.00
Mo. 5500	12" Extension	3/4" Hex	3/a 1b.	NOGUN	4.00
High Spec	ed Pilot Drills			NOGYS	1.50

Packed one Saw, Mandrel or Extension in a bax



HIGH SPEED HOLE SAWS







Mandrel



Saw

Replaceable Saws and Drills

With a cutting edge or blade made of the finest molybdenum high speed steel hardened and tempered for fast cutting in the hardest alloy steels or any other machinable material. Originally developed for the use of automotive mechanics, steamfitters, plumbers, millwrights and electricians they are finding many cost saving applications on construction jobs and in industry.

They can be taken to the job since they are readily driven by any portable power tool with a 1/2 inch or larger chuck, or they can be used in a drill press, lathe and some other machine tools.

The saw or blade is rigidly locked in the body or cup by means of an expansion bolt. The assembled cup and saw is driven by a mandrel which screws into the top of the cup. The mandrel also hold and drives a pilot drill which enters the work ahead of the saw at the desired center of the hole to be cut. Knockout springs are supplied on mandrels of sizes 3/4 to 31/2 inches inclusive, to facilitate removal of the plug cutout. Larger sizes have knockout holes in the top of the cup.

Saws and pilot drills can be replaced quickly and easily at very small cost when worn out. The cups and mandrels can be used indefinitely making this the most economical saw of its type available

CUTTING DERTH % INCH

Code: LUSE

Cuili	NO D	Erin /	14611			for Figs							For For
Size		and Saw		Only	For Fige Top Size	Entrares Size	Size laches	Cup	and Saw Price	No.	Price	Top Sur	See
Inches	No.	Frice	No	Price	10p 349		21/2	40	\$2.70	040	\$1.80		2
34	12	\$1.80	012	\$0.90	200	3%		42	2.70	042	1.80	2 1/2	
7/8	14	1.80	014	.90	34	1/2	23/2		2.70	044	1.80		
15%	15	1.80	015	.90			2 %	44		046	1.80		
, "	16	1.80	016	.90			2 1/8	46	2.70	048	1.80		2 1/2
1.3%	17	1.80	017	.90			3	48	2.70		1.80		
11/4	18	1.80	018	.90	1	3/4	31/4	50	2.70	050	1.80		
2.26	20	1.80	020	.90			31/4	52	2.70	052			
1 1/4	22	1.80	022	.90		1	3 3%	54	2.70	054	1.80		
13%		1.80	024	.90	1 1/4		3 1/2	56	2.70	056	1.80		3
1 1/2	24		026	1.30	4.44		3.5%	58	3.10	058	1.85		-
1.5%	26	2.20	028	1.30	11/2	1 1/4	4	64	3.40	064	2.15		3 1/2
1.34	28	2.20		1.30			436	66	3.40	066	2.15		2
1 1/2	30	2.20	030			1.55	4 1/4	68	3.40	068	2.15		
2	32	2.20	032	1.30		1 72	4.34	76	4.30	076	2.45	4 1/2	
2 1/4	33	2.20	033	1.30			51/4	82	4.60	082	2.75		
21/4	34	2.70	034	1.80				90	4.95	090	3.10		
21/4	36	2.70	036	1.80			5 %	40	4.73	310			
2.36	3.8	2.70	038	1.80									

MANDRELS WITH PILOT DRILLS

	Weight	Code
No. 1218 for sizes Nos. 12 to 18 No. 2054 for sizes Nos. 20 to 56 No. 5890 for sizes Nos. 58 to 90 Extra Pilot Drills	1/4 lb. 1/2 lb. 1/2 lb.	LUDAM LUDET LUDIZ LUDCR

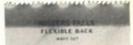
Packed one Saw, one Cup and Saw or one Mandrel in a box



FLEXIBLE BACK METAL CUTTING BAND SAWS







For Straight, Contour or Profile Sawing

Made of tough alloy steel with a carefully hardened cutting edge and a softer, tough flexible back.

They cut fast and are long-lived. Careful selection of the type, pitch and cutting speed is essential for the best performance and economy.

Two types of teeth are available. "Regular" for ferrous metals—"Skip Tooth" for non-ferrous metals, wood, plastics, fibres, etc.

REGULAR TOOTH

In Coils (100', 250' or 500') or Cut to Length

Width -	Thirtman	Teeth per inch	List Price per foot	Welds
16a -	7 hidoness .025 .025 .025 .025 .025 .025 .025 .025	18- 32 18- 32 14-18-24 10- 14-18-24-32 10-12-14-18-24-32 8-10- 14-18-24 6- 10*- 14*-18-24 8-10*- 14*-18-24	\$0.12 .12 .12 .12 .12 .12 .12 .136 .136	\$0.60 .60 .60 .60 .60 .60
*	.032	6-8-10*-12*-14*-18 6-8-10*- 14	.192	.60 .60

All 6 to 24 pitch saws have Raker Set - 32 pitch have Wavy Set only.

"Pitches marked with asterisk are available in Wavy Set also.

SKIP TOOTH

In Coils (100', 250' or 500') or Cut to Length

Wights inches	Thickness	Teeth per inth	Ust Price per foot	Walds each
% % %	.025 .025 .025 .025 .032	4-6 3-4 3-4 3 2-3	\$0.12 .128 .136 .192	\$0.60 .60 .60

REGULAR OR SKIP TOOTH

Cut to Length and Welded

Sangtha Inclusive	Under % 025	.025	.025	.032	.032	.035
5'6" to 4'5"	\$1.32	\$1.37	\$1.42	\$1.61	\$1.75	\$2.04
0 6" to 7' 5"	1.44	1.50	1.55	1.78	1.94	2.28
6" to 8' 5"	1.56	1.62	1.69	1.94	2.14	2.52
8 6" to 0' 5"	1.68	1.75	1.82	2.11	2.33	2.76
9 4 4	1.80	1.88	1.96	2.28	2.52	3.00
THE SECTION ASSESSMENT	1.92	2.01	2.10	2.45	2.71	3.24
6" to 12' 5"	2.04	2.14	2.23	2.62	2.90	3.48
120 2 4 1 1 1 1	2.16	2.26	2.37	2.78	3.10	3.72
	2.28	2.39	2.50	2.95	3.29	3.96
MATRIA	2.40	2.52	2.64	3.12	3.48	4.20
	2.52	2.65	2.78	3.29	3.67	4.44
10 6" to 17' 5"	2.64	2.78	2.91	3.46	3.86	4.68
	2.76	2.90	3.05	3.62	4.06	4.92
10 0 to 10'5"	2.88	3.03	3.18	3.79	4.25	5.16
	3.00	3.16	3.32	3.96	4.44	5.40
30' 6" to 21' 5"	3 12	3.29	3.46	4.13	4.63	5.64



SPRING TEMPER METAL CUTTING BAND SAWS

MILLERS FALLS SPRING TEMPER

This type of saw is made of the finest quality spring tempered steel which can readily be resharpened and reset.

Their applications for economical use should not be confused with those of the hard edge, flexible back type on the preceding page. They are recommended for cutting aluminum, magnesium, brast, thin metal sheets, plastics, fibre and similar materials.

In Coils (100' or up to 1000') or Cut to Length

Width inches	Thickness	Teeth per inch	List Price per foot	Weld
1/4	.025	8-10	\$0.14	\$0.50
3/6	.025	8-10	.15	.50
3% 3%	.032	8-10	.16	.50
1/2	.025	6-8-10	.17	,50
1/2	.032	6-8-10	.18	.50
3/4	.025	4-6-8-10	.18	.60
36	.032	4-6-8-10	.20	.60
3/4	.035	4-6-8-10	.21	,60
34	.035	4-6-8	.23	.60
1	.035	4-6-8	.28	.60
11/4	.042	3-4	.35	70
154	.049	3-4	.38	.70

Deduct \$0.04 per foot if neither filed nor set; deduct \$0.0125 per foot if filed and not set; deduct \$0.0275 per foot if set and not filed.

Cut to Length and Welded

					and.							-
Lengths Inclusive	.025	.025	.032	19° .025	032	.025	.032	.035	035	.035	042	7ia .045
5' 6" to 6' 5"	\$1.34	\$1.40	\$1.46	\$1.52	\$1.58	\$1.68	\$1.80	\$1.86	\$1.98	\$2.28	\$2.80	\$2.98
6'6" to 7'5"	1.48	1.55	1.62	1.69	1.76	1.86	2.00	2.07	2.21	2.56	3.15	3.36
7'6" to 8'5"	1.62	1.70	1.78	1.86	1.94	2.04	2.20	2.28	2.44	2.84	3.50	3.74
8'6" to 9'5"	1.76	1.85	1.94	2.03	2.12	2.22	2.40	2.49	2.67	3.12	3.85	4,12
9' 6" to 10' 5"	1.90	2.00	2.10	2.20	2.30	2.40	2.60	2.70	2.90	3.40	4.20	4.50
10'6" to 11'5"	2.04	2.15	2.26	2.37	2.48	2.58	2.80	2.91	3.13	3.68	4.55	4,88
11'6" to 12'5"	2.18	2.30	2.42	2.54	2.66	2.76	3.00	3.12	3.36	3.96	4.90	5.20
12' 6" to 13' 5"	2.32	2.45	2.58	2.71	2.84	2.94	3.20	3.33	3.59	4.24	5.25	5.64
13' 6" to 14' 5"	2.46	2.60	2.74	2.88	3.02	3.12	3.40	3.54	3.82	4.52	5.60	6.02
14' 6" to 15' 5"	2.60	2.75	2.90	3.05	3.20	3.30	3.60	3.75	4.05	4.80	5.95	6.40
15'6" to 16'5"	2.74	2.90	3.06	3.22	3.38	3.48	3.80	3.96	4.28	5.08	6.30	6.78
16' 6" to 17' 5"	2.88	3.05	3.22	3.39	3.56	3.66	4.00	4.17	4.51	5.36	6.65	7.10
17' 6" to 18' 5"	3.02	3.20	3.38	3.56	3.74	3.84	4.20	4.38	4.74	5.64	7.00	7.54
18' 6" to 19' 5"	3.16	3.35	3.54	3.73	3.92	4.02	4.40	4.59	4.97	5.92	7.35	7.97
19' 6" to 20' 5"	3.30	3.50	3.70	3.90	4.10	4.20	4.60	4.80	5.20	6.20	7.70	8.30
20'6" to 21'5"	3.44	3.65	3.86	4.07	4.28	4.38	4.80	5.01	5.43	6.48	8.05	8.68

HACKSAW FRAMES





NO. 84 HACK SAW FRAME



The Finest Frame Ever Made

The frame is made of fine quality steel 1/16 inch thick by 11/16 inch wide and the back is hard, touch steel 1/16 inch thick. The rear portion of the frame, stamped from 1/16 inch steel, affords a rigid support for the handle and a guard that gives complete protection to the hand. The handle is made of unbreakable, transparent red "Tenite" comfortably shaped and checked to afford a good grip.

Easily adjustable for 8 to 12 inch blades which are held by sturdy studs with heavy pins set clips that permit facing the blade in four directions. Any desired tension on the blade can be secured by turning up the large wing nut at the rear. Equipped with a Millers Falls "Blu-Mol" High Speed Hack Saw Blade. Beautifully polished, heavily nickel plated and buffed throughout.

No. 84

8-12

314"

314 x 1314"

Weight 1 lb. 15 ozs.

IGOTU

Price and \$4.10

Packed one in a box

NO. 48 HACK SAW FRAME



For design, serviceability and price appeal in the higher quality field this frame has never been approached. Its unusual rigidity and fine balance, combined with its finely polished, nickel plated and buffed finish, are sure to make it one of the year's best sellers. The fully guarded handle is made of unbreakable, black "Tenite." It is nicely checked to afford a comfortable, sure grip. Adjustable for 8 to 12 inch blades. Equipped with one 10 inch blade.

No. 48

8-12"

Depth 314

3/4 x 11/4"

Weight 1 3/4 lbs.

Code INPAR Brick and \$2.80

Packed one in a box



NO. 300 HACK SAW FRAME



Hew

The new lever tensioning device with which this fine new frame is equipped supplies more tension with less effort, easier and quicker blade changing, more accurate cutting and more cutting value from every blade. Tension is released by pulling down the lever that hugs the bottom of the frame below the handle. It is instantly restored after the blade has been changed and the lever snapped back into the normal position.

The heavy duty frame is very rigid insuring lasting alignment of the blade. It is made of 1/16 x 3/4 inch steel and the back is stamped his inch hard steel as is the entire handle frame.

The handle is made of tough, unbreakable, red "Tenite" molded on in one piece. It gives a sure, comfortable grip. The frame has an unusually pleasing balance. Quickly adjustable for 10 or 12 inch blades which may be faced in any of four directions.

All exposed metal parts beautifully polished, nickeled and buffed. A 10 inch Millers Falls "Tuf-Flex" Special Alloy, Flexible Blade is supplied with each frame.

No. 300

Capacity 10-12" 3 1/4"

3% x 34"

Weight 2 lbs

Crisia IBYOR Price work \$3.50

Packed one in a box

NO. 1027 HACK SAW FRAME



A fine quality frame that appeals instantly to the tool-wise purchaser. The heavy back reinforcement extends down the entire length of the molded black pistol grip handle making it practically unbreakable. The hang is excellent. Adjustable for 8 to 12 inch blades which can be faced in four directions. Equipped with one 10 inch blade. Finely polished, nickel plated and buffed.

No. 1027

8-12

314"

36 x 156"

1.34 lbs.

ICHNO

\$2.10

Packed two in a box



NO. 1237 HACK SAW FRAME



A substantial and serviceable frame with specially reinforced back and fitted with the popular black molded pistal grip handle with metal reinforcement its entire length. Easily adjustable for 8 to 12 inch blades which can be faced in four directions. Equipped with one 10 inch blade.

All exposed metal parts nickel plated.

Copocity No. 1237 8-12"

Depth 31/4"

Stock 3/16 × 15/16"

Weight 1 34 lbs.

Code INVER

Print sud \$1.50

Pocked two in a box

NO. 99 HACK SAW FRAME



A serviceable frame offered at a very attractive price. The handle is made of black composition reinforced its entire length, knurled and shaped to give a sure, comfortable grip. The balance of excellent. The frame construction is substantial and permits ample tension on the blade by mean of a wing nut. Blade can be faced four ways. Equipped with one 10 inch hack saw blade. Quickly and positively adjustable for 8 to 12 inch blades.

All exposed metal parts nickel plated.

No. 99

Copiecity 8-12" Depth 234

Stock 550 x 1354"

Weight 1 1/4 lbs. INNOT

frie est \$1,00

Pocked two in a box

NO. 1934B HACK SAW FRAME





A sturdy, rigid frame built specially to meet Federal Specifications. It is easily adjustable for 8 to 12 inch blades which can be faced in any of four directions. Ample tension is secured by the wing multion the outer stud. Finished in black "Ebonite" finish with the handle of mahogany lacquered hardwood

No blade furnished with this frame.

No. 1934B

Copiecity 8-12"

Dente 3"

75a × 756a" Packed two in a box Weight 1 1/4 lbs.

Code ICORT True sed \$1.20



NOS. 125 and 126 HACK SAW FRAMES



Well made, non-adjustable frames, low price. Made for 10 and 12 inch blades which may be faced in any one of four directions. Blade tension secured by turning the straight, mahagany finished, hardwood handle. One blade furnished with each frame, All exposed metal parts nickel plated.

	Coposity	Depth	Stock	Weight	Code	Price each
No. 125	10"	31/4"	3/16 × 11/16"	1 lb.	IMBED	\$1.05
No. 126	12"	31/4"	31a x 15/a"	1 1/4 lbs.	IMBUE	1.20
			Packed two in a box			

NO. 515A HEAVY DUTY HACK SAW FRAME



Made for extra heavy cutting of large rods, bars, rails, structural shapes, etc. The heavy backs have smooth, even bends. Ample blade tension is secured by turning the large wing nut on the outer stud. Blades can be faced in four directions. One 12 inch blade furnished with each frame. Attractively finished in black enamel with a mahogany finished hardwood handle.

Copacity Depth Stock Weight Code Price each No. 515A 12" 51/4" 14 x 1" 2 lbs. \$2.95 BIAC Packed one in a box

NO. 24 RAIL SAW



A heavy duty frame with a deep 101/4 inch throat for cutting steel rails and large structural shapes. Handles are selected hardwood shaped to give a sure, comfortable grip. The large wing nut gives ample tension on the blade which can be faced in four directions. One 12 inch blade furnished. Nicely black enameled with handle in natural lacquered finish.

No. 24

Copocity 12"

Depth

1034"

1/4 x 1" Packed one in a box

Weight 3 % lbs.

Code ILECK Price each \$3,50



NO. 1723 HACK SAW FRAME



A serviceable, all-metal frame adjustable for 8 to 12 inch blades. Pressed steel pistol grip handle checked to give a good, sure grip. Blades can be faced four ways. Thumb nut provides ample tension on blade. One 10 inch blade furnished with each frame. Entire frame nickel plated.

No. 1723

Exposity 8-12* Depth 3 1/4"

316 × 11/16"

Weight 1 ½ lbs. Code IMPEL \$1.75

Packed two in a box

NO. 168 HACK SAW FRAME



Frame well constructed throughout and fitted with an indestructible all-metal pistol grip handle. It is adjustable for 8 to 12 inch blades which may be faced in any of four directions. Thumb nut provides blade tension. Entire tool well nickeled. Equipped with one 10 inch blade.

No. 168

B-12"

Depth 2 34 ° 5tock 55z x 156* Weight 11/2 lbs. Code INROT \$1.50

Packed two in a box

NO. 237 KEYHOLE HACK SAW



The new handle with which this famous little tool is now equipped will make it more popular than ever It gives a surer grip and better control. It is nicely finished in red and black enamel.

The blade with 18 teeth per inch has carefully hardened and tempered teeth and a soft flexible back which minimizes breakage. It cuts nails, metal lath, plaster board, stucco, armored cable, conduit, packing, bone, bakelite, fibre, hard and soft wood, etc., etc. It can be used in countless places where the ordinary hack saw will not operate.

No. 237

Length Blade 51/2" Length Overall 9 1/2" Weight 4 OIS.

YEYAT

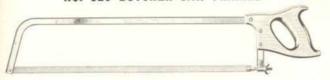
\$0.35 \$2.00 2.00

No. 7 No. 8 Extra Blades 18 Tooth Extra Blades 24 Tooth YEYDB YEYGA

Packed six complete saws or one dozen blades in a box



NO. 320 BUTCHER SAW FRAMES



Sturdy, well balanced frames, well built throughout for long satisfactory service. The frame is made of nicely finished 1/4 by 1/4 inch round edge steel. Each frame is equipped with a high quality 1/5 inch spring tempered saw blade tensioned by means of a large wing nut operating on the rear stud. The comfortably shaped hardwood handle has a natural lacquered finish. Frame and parts nickel plated.

	Length	Depth	Snock	Weight	Code	Price each.
No. 320	18"	5*	1/4 x 3/4"	1 1/2 lbs.	YILIX	\$2.00
No. 320	22"	5"	Va. x 34"	2 1/e lbs.	YILLA	2.20
No. 320	24"	5*	1/4 x 3/4"	2 % lbs.	YILKO	2.30

Packed two in a box

NO. 420 BUTCHER SAW BLADES



Made from the finest quality of spring steel, $\frac{1}{2}$ inch wide, tempered, ground and polished. The teeth are set and filed after setting, making a very free, fast-cutting blade. Ends are rounded and punched to length.

	Length	Wide	Weight, Box	Code	\$2.00
No. 420	18"	3/6"	5 lbs 5 ozs.	YOJKO	
No. 420	22*	3/6"	6 lbs. 3 ozs	YOAE	2.40
No. 420	24"	56"	7 lbs.	AMLOY	2.55

Packed one-half grass in a box

NO. 83 KITCHEN SAW



A well made, serviceable saw for use in the home for cutting green bone and frozen meat. The frame is made of 3/1s by 1/2 inch round edge steel. The handle is made of selected hardwood with a natural lacquer finish.

Each frame is equipped with a polished and tempered blade, ½ inch wide, which is filed and set for fast, free cutting.

No. 83 Length Blode Shock Weight Code Price Blod \$1.00

Packed six frames in a box; six dozen blades in a box



BUTCHER SAW BLADES IN COILS

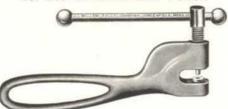


These coils are made of one continuous strip of the finest quality, spring tempered steel with a bright, ground and polished finish. Blue finish can be supplied, if desired. The teeth are set and then filed after setting, making them exceptionally sharp and ready for immediate use. The teeth are correctly shaped and pitched — 11 teeth per inch — for free, easy cutting. They can be readily refiled with the proper equipment.

Supplied in either 25 or 50 foot coils put up in a box from which they are easily dispensed in the

- Contract Contract	Length	Width	Teeth	Weight	Code	Price per til
No. 251	25'	36"	11	1 1/4 lbs.	YIALM	\$3.70
No. 252	25'	34"	11	1 3/4 lbs.	YIANP	3.70
No. 311	50"	56"	11	2 1/2 lbs.	YUUP	7.40
No. 312	50'	3/4"	11	3 1/2 lbs.	YIKAL	7.40

NO. 200 BUTCHER SAW PUNCH



There is so much variation in the sizes of various styles of butcher's saw frames that most of the better class of butcher's saw blades or coils are not punched when they leave the factory. All dealers in, and users of, these blades will find this inexpensive device very convenient for punching the necessary holes

The frame is made of black enameled, malleable iron. The screw and crossbar are polished steel The punch and die are made from fine tool steel carefully hardened and tempered to punch spring steel Price end

Length

No. 200 1364"

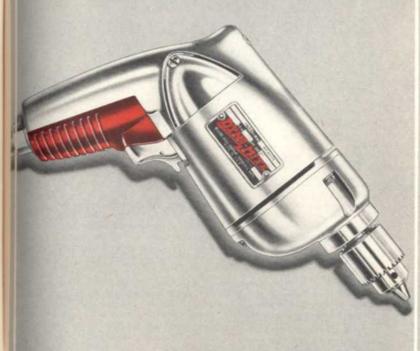
Size Hole

7 ors. Packed one in a box

Weight

Code YEMAJ \$1.30

ELECTRIC







MILLERS FALLS PORTABLE ELECTRIC TOOLS

GENERAL UTILITY LINE

With this catalog we announce the first of a complete line of utility tools and accessories produced to meet the particular requirements of the individual tool user, such as, home owners, carpenters, farmers, model and pattern makers, hobbyists and a host of others who need power tools for intermittent use, at reasonable prices.

There are no finer tools in this class than the new $\frac{1}{4}$ inch and $\frac{1}{2}$ inch drills and stands listed on pages 110 and 111. They are attractive in appearance and are finished to reflect their fine construction throughout. Their power is conservatively rated giving a reserve safety factor not found in other comparable drills.

These tools will be distributed through the hardware jobbing trade and afford a satisfactory spread for the jobber and dealer alike.

Discounts to the trade will be quoted on request.

STANDARD INDUSTRIAL LINE

The regular line of Millers Falls Electric Tools, long and favorably known for their fine performance and dependability, is designed and engineered throughout for production use in industry and in the automotive, plumbing, heating, construction, electrical and many other fields. The wide range of capacities, speeds and power now available answer most every requirement encountered. New tools in development will make the line even more attractive as an outstanding merchandising opportunity.

It is sold, on a selective basis, through recognized distributors and Millers Falls Co. will welcome the opportunity of discussing a distributorship with any qualified concern. Our policy and effective co-operation are liberal and fair in every detail and should lead to a mutually satisfactory association.

Write for complete electric tool catalog and further particulars.

SERVICE STATIONS

More than thirty strategically located service stations are available in the United States and Canada for the repair or reconditioning of Millers Falls Electric Tools. They carry complete stocks of parts and have the equipment and skilled personnel to render unusually prompt and efficient service.



GENERAL PURPOSE BENCH GRINDER



New

For Grinding, Wire Brushing and Buffing

A fine, new grinder that is rugged, powerful and reliable. The design of both the mechanical and electrical parts is excellent and the performance is comparable to that of much higher priced grinders.

It is nicely suited for a great variety of "touch up" jobs in industry and the requirements of automotive, plumbing and heating, electrical or other types of repair shops. It is equally valuable to home workshop owners, farmers and craftsmen in general.

The heavy 14½ inch spindle runs on large, grease sealed, precision ball bearings. Greater distance between the motor housing and the wheels gives increased accessibility and a wider flexibility of use particularly on brushing, polishing and buffing. The heavy, wider wheel guards are mounted directly on the spindle housing. The work rests are easily adjustable.

OVERALL HEIGHT: 91/2 inches. Bench to center of spindle 511/4 inches.
MOTOR: Powerful 1/4 H.P. for 50/60 cycle A.C. only. 115 or 230 volts.

SPINDLE: Ball bearing. Overall length 14 1/2 inches.

WHEELS: One each coarse and fine, high grade abrasive.

CORD: Six feet of high quality, three conductor with plug.

	Roting	Wheels	No Lood R.F.M.	Shipping weight	Code	Price each
No. 60	34 H.P.	6 x 1/2 x 1/2"	3450	45 lbs.	NILUR	\$39.50
No. 867	Plain Eye Shields, p	per pair		1 % lbs.	DORPA	3.00
No. 8610	Illuminated Eye Shi	elds, each		3 1/4 lbs.	DOSSY	7.50
No. 7600	Cast Floor Pedesta	l, each		85 lbs.	DUBAX	23.00

For Grinding and Wire Brush Wheels, see pages 76 and 126



GENERAL UTILITY DRILL

New

1/4 INCH



A truly wonderful 1/4 inch drill developed with the sole objective of giving the individual craftsman a better drill than ever available before at such a low price.

It is a smooth running, powerful, sturdily built tool to meet the particular requirements of hote owners, farmers, cabinet makers, carpenters, model and pattern makers, hobbyists and a great variety of light maintenance and repair shops. The pleasing lines, light weight and excellent balance are a promise of the long, dependable service it will deliver and which all tool-wise mechanics count of from a Millers Falls Tool.

A number of interesting attachments with accessories for use in this drill are in development and will be announced shortly Sanding, grinding, buffing and wire brushing are among the operation that can be performed.

MOTOR: Universal for D.C. or A.C. - 25 to 60 cycles - 115 and 220/230 volts.

HOUSING: Die cast aluminum alloy. Hammered grey enamel finish.

CHUCK: New Millers Falls Precision.

GEARS: Alloy steel — grease lubricated.

BEARINGS: Ball thrust spindle — all others oil impregnated bronze.

SWITCH: Single pole — make and break

CORD: Seven feet of two conductor, Type SJ, with moulded rubber reinforcement and plug.

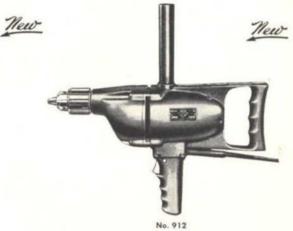
	Capacity in Steel	No Lood R.P.M.	Amps. Full Load	Length overa	i	eight	Code	price.
No. 914	1/4"	2500	2	111/2"	31/	5 lbs.	PANON	\$19
No. 2115 No. 2014 No. 2914	Wheel Arbor for Bench Stand, Bass Bench Stand	4 x ½ x ½" ' e 4 ½ x 2", H	Wheels eight to Chuck	5%"	To be or	lbs.	PARAR PAREB	1 3



GENERAL UTILITY DRILL

1/2 INCH





No. 2912

Approved by the Underwriters Laboratories

The Best Dollar Value of any Drill Made

for the craftsman whose work requires a drill of ½ inch capacity this tool offers a remarkable value. thas more power, finer construction, better performance and less weight than any comparable drill on the market. It is ruggedly built, amply powered and heavily insulated.

MOTOR: Universal for D.C. or A.C. — 25 to 60 cycles — 115 and 220 230 volts.

HOUSING: Die cast aluminum alloy. Fine hammered grey enamel finish.

CHUCK: No 338 Jacobs Standard key-operated. CAPACITY: 1/2 inch in steel — 1/4 inch in hard wood.

GEARS: Alloy steel — grease lubricated.

EARINGS: Ball thrust spindle bearing — all others oil impregnated bronze.

WITCH: Double pole with lock — automatic trigger release.

CORD: Three conductor, Type SJ, cord with moulded rubber reinforcements and plug cap with grounding terminal connector.

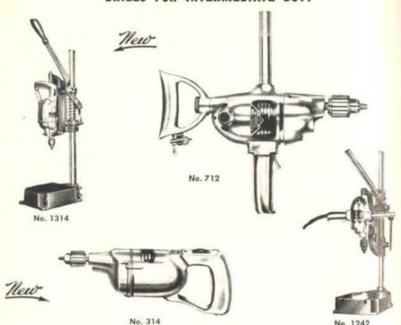
	Capacity in Steal	No Load R.P.M.	Amps. Full Load	Length overall	Weight	Code	Price each
No. 912	1/2"	450	3	15"	8 lbs.	PANNA	\$35.00

BENCH STAND

	For Drill No.	Max Check to Toble	Max. Chuck to Column	Max feed	Weight	Code	Price each
No. 2912	912	14*	51/4"	31/4"	26 lbs.	PARAB	\$16.80



DRILLS FOR INTERMEDIATE DUTY



These two beautifully designed and engineered drills are built to a high standard to meet the requirements for a ¼ inch and ½ inch drill for intermediate service on maintenance and repair job. On the work for which they are intended they can be depended on for smooth, uninterrupted performance.

MOTORS: Universal for D.C. or A.C. - 25 to 60 cycles.

VOLTAGES: 115, 125, 150, 230 or 250.

CHUCK: Jacobs key-operated. GEARS: Heat-treated alloy steel, BEARINGS: Ball thrust spindle—all others oil impregnated bronze.

SWITCH: Fully enclosed. Double pole.

CORD: Ten feet of high quality, three conductor with unbreakable plug.

	Copecity in Steel	No Load R.P.M.	Amps. Full Load	Length overall	Weight	Code	Your e
No. 314 No. 712	1/4 " 1/2 "	1800	2.2 3.5	12"	4 ½ lbs. 10 ½ lbs.	DAMOY	\$25.0

BENCH STANDS

For Drill No.	Max Chuck to Table	Mox. Chuck to Column	Max feed	Weight	Code	From P
314	131/2"	5"	21/2"	25 lbs.	DYNUT	\$11.
712	191/2"	71/2"	4 1/2"	77 lbs.	DYREX	27.
	Drill No.	Drill No. to Table 314 13 1/2 "	314 13½" 5"	Drill No. to Table to Column Max feed 314 13½" 5" 2½"	Drill No. to Table to Column Max feed Weight 314 13½° 5° 2½° 25 lbs.	Drill No. to Table to Column Max Feed Weight Code 314 13½° 5° 2½° 25 lbs. DYNUT



"DYNO-MITE" PRODUCTION DRILLS



New

More Power More Production Longer Service

his new, improved line of "Dyno-Mite" drills has been augmented by the addition of a high torque sadel equipped with a % inch chuck nicely adapted to the airplane and many other industries. The sates are more powerful; finer materials used and fabrication held within the closest tolerances. "Dyno-Mite" drills are efficient, highly dependable production tools.

No. 220, 1600 R.P.M. is recommended for general service in steel, while the high speed models are ideal for drilling small diameter holes in non-ferrous metals with minimum burr. The slower speed, torque models are recommended for stainless and the hard alloy steels up to 1/16 inch and full to the capacity in non-ferrous metals.

OTOR: Universal D.C. or A.C. 25 to 60 cycles. VOLTAGES: 115, 125, 220/230, 250.

OUSING: Die cast aluminum, fine grey enamel finish.

CHUCK: Jocobs key-operated.

ARINGS: Armature, intermediate gears and spindle, grease sealed, ball bearing.

EARS: Heat-treated alloy steel throughout.

MITCH: Double pale, with lock, automatic trigger release.

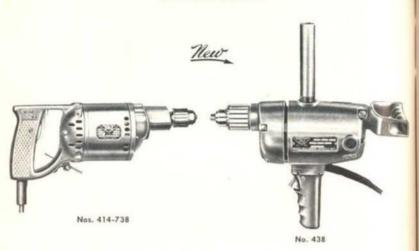
CORD and PLUG: Ten feet of three conductor heavy duty cord with plug.

	Chuck	Steel	Non-Farrous	No Load Speed R.P.M.	Length overall	We	ight	Code	Frice eoc
9. 220			474	1145	0.77.7	-			***
225	54."	1/4"	1/4"	1600	8 1/4"	3	lbs.	DARAT	\$38.0
225	1/4"	714"	14"	2500	8 1/4"	3	lbs.	DAREL	38.0
230	1/4"	3/22"	3/4"	3500	8 1/4"	3	lbs.	DAREX	38.0
3733 E	14"	1/4"	1/4"	5000	8 1/4"	3	lbs.	DARID	38.0
240	514"	3%	314"	800	9 3/4"	3 1/2	lbs.	DAROW	44.0
245	3/4"	56.0	3/14"	500	93%"	31/2	lbs.	DAROF	44.0
250	3/4"	34	36"	800	101/4"	4	lbs.	DARRO	46.0
755	34."	54."	3/6"	500	101/4"	4	lbs.	DARYS	46.0
90 Univer	val Picht A	nale Drive		for Nos. 220, 2		240 an	1245	DETRO	30.0

113



ELECTRIC DRILLS



These are industrial drills of the highest order. They have been used on every sort of application and found tried and true. Constant improvement and refinement of their electrical units and the precision machining of all vital metal parts insures the long life and dependable service for which they are famous.

The new No. 438 replaces the No. 538 in response to a growing demand for a close coupled heavy duty drill of 1/2 inch capacity. It is one of the finest tools ever produced.

MOTORS: Universal for D.C. or A.C. - 25 to 60 cycles - 115, 220, 230 and 250 volts.

CHUCKS: Jacobs key-operated.

GEARS, PINIONS and SPINDLES: Finest heat-treated alloy steel.

BEARINGS: Nos. 414 to 738 ball bearing armature with bronze spindle bearings.

No. 438 ball bearing armature and spindle. All others needle roller.

BRUSHES: Long life pigtail - accessible from without.

SWITCHES: Double pole, fully enclosed. Underwriter approved.

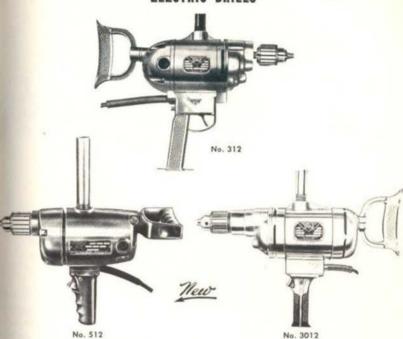
CORD: Ten feet of best rubber covered three conductor, Type S, with unbreakable plug.

	Copocity in Steel	Standard No Load R.F.M.	Special No Load R.P.M.	Amps. Full Load	Length averall	Waight	Code	Price P
No. 414	1/4" Std.	1800	3000	2.5	12"	5 1/4 lbs.	DIANA	\$40.
No. 514	14" H.D.	2000	1000-1500-3000	3.0	14"	7 lbs.	DRAWL	50- 52- 53-
No. 516	316" H.D.	1500	2000	3.0	14"	7 3/8 lbs.	DROVE	52
No. 638	3% Spl.	1000	1500	3.0	14	7 1/2 lbs.	DINOX	53
No. 738	36" H.D.	400	None	3.0	14"	8 3/4 lbs.	DAHOV	53 58
No. 438	36" H.D.	900	None	4.5	147	9 1/2 lbs.	DINNO	58

Special speeds as above \$2.50 extra. For Stands and other Accessories see pages 117 and 126.



ELECTRIC DRILLS



The requirements for drills with $\frac{1}{2}$ inch capacity are completely covered by these three fine tools. They are rugged and powerful and built up to the high standards set for all Millers Falls Tools.

The addition of the new No. 512 answers the demand for a compact unit for use in close quarters or by operators who prefer this type of design for general use.

MOTORS: Universal for D.C. or A.C.— 25 to 60 cycles — 115, 220, 230 and 250 volts.

CHUCKS: Jocobs key-operated.

GEARS, PINIONS and SPINDLES: Finest heat-treated alloy steel.

SEARINGS: No. 312 ball bearing armoture. Spindle bronze sleeve with ball thrust bearing. All others bronze

No. 512 ball bearing armature and spindle. All others needle roller.

No. 3012 ball bearing armature and spindle. All others bronze sleeve.

ERUSHES: Long life pigtail — accessible from without.

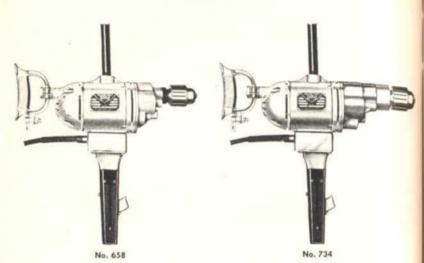
MITCHES: Double pole, fully enclosed. Underwriter approved.

CORD: Ten feet of best rubber covered, Type 5, three conductor with unbreakable plug.

	Capacity in Steel	No Lond R.P.M.	Amps. Full Load	Length overall	Weight	Code	Price each
No. 312 No. 512 No. 3012	1/2" Std. 1/2" Std. 1/2" H.D.	525 550 650	4.5 5.0 5.5	17" 14" 18"	15 1/4 lbs. 9 1/2 lbs. 19 lbs.	DIRCK DIRIL DIRYL	\$58.00 58.00 75.00
		Ene Stonde on	d Assessment		7 124		



ELECTRIC DRILLS



Each of these rugged, heavy duty drills is available in two speeds which completely cover requirements in these capacities. They are perfectly suited for such jobs as driving pipe-threading machines positive set cylinder grinders and hones and similar applications.

The spindles of Nos. 734 and 801- are mounted on Timken Taper Roller Bearings, otherwise these drills have precision ball bearings throughout.

MOTORS: Universal for D.C. or A.C.— 25 to 60 cycles — 115, 220/230 and 250 volts.

CHUCKS: Jacobs key-operated. No. 801 has No. 3 M.T. Socket.

BEARINGS: Ball bearing armatures; Nos. 734 and 801 Timken Roller Bearing.

GEARS, PINIONS and SPINDLES: Heat-treated alloy steel.

SWITCHES: H.D. double pole, fully enclosed. Underwriter approved.

BRUSHES: Pigtail — mounted on rocker ring.

CORD and PLUG: Ten feet best rubber covered, Type 5, three conductor with armored plug.

	Copincity in Steel	No Load R.P.M.	Special R.P.M.	Amps. Full Load	Length overall	Weight	Code	Price
No. 658 No. 734	% " H.D. % " H.D.	475 400	700 275	6.5 7.5	19 1/4"	22 13% lbs. 26 % lbs.	DOTTY	\$ 92 105 120

Special Speeds, \$2.50 extra. For Stands and Accessories see pages 117 and 126.



DRILL AND SCREW DRIVER STANDS AND ACCESSORIES





No. 3344

No. 3160

No. 1238

0. 1514

No. 55

he well-built stands listed below make efficient bench units of the Millers Falls Drills and Screw Drivers which they are designed. The bases are large enough for stability and afford ample support to heavy columns which carry the adjustable brackets that hold the tool. The feed levers with spring than provide ample drilling pressure or feed for driving screws or running nuts.

No. 3344 Goose Neck Stand provides spring suspension hand feed only.

	For Drills and/or Screw Drivers	Max, Chuck to Table		Max. feed	Base	Weight	Code	Price each
1014 1238 1514 1514 15360 15344	312, 3012, 658, 734 and 801 414, 514, 516, 638, 11 and 22	16 " 13 ¼" 16 ½"	7%; 6; 5 *	4 ¼ ° 3 ° 2 % °	5 x 2 1/4" 10 x 10" 9 1/4 x 8" 11 1/4 x 6 1/4"	77 lbs. 37 lbs.	DUCKE DIWAC DIACK DIAGO	\$ 3.50 35.00 20.00 20.00
No. 5014	and 50	41/4"	71/2"	51/4"	4½×2° 8¼×8¼°	7 lbs. 2 lbs. 46 lbs.	DAPIR DUCLO DIWEL	5.00 3.50 26.00

Switch Controls and Limit Switches available for vertical stands

ACCESSORIES

N.	Accessory	For use with Stands and or Drills Nos.	W	eight	Code	Price each
1511	Wall Brackets	1238, 1242, 1514 and 5120	2 y	lbs.	DAMEZ	\$ 2.00
1517	Drill Vise (2 1/2 x 3")	All vertical stands	7	lbs.	DIFTS	4.50
3163	Foot Treadle Feed	1238, 1242, 1514, 3160 and 5120	20	lbs.	DAPAT	8.00
55	Power Feed	All drills with pipe side handles	3	lbs.	DRULO	19.95



"DYNO-MITE" PRODUCTION SCREW DRIVERS



On production assemblies where a myriad of screws or nuts must be driven rapidly, with nicely and uniform torque, thousands of manufacturers know and insist on the velvet smooth, vibrationless adias and sensitive adjustability of Millers Falls "Adjustomatic" Clutches.

Driven by the new, more powerful "Dyno-Mite" power unit these tools have no equal in their field. They handle machine screw and wood screw applications within their capacity efficiently, dependably and with accelerated production.

The 1600 R.P.M. unit is recommended for general all around use. The 500 and 800 R.P.M. high torque units are recommended for all sheet metal screws, self-tapping screws and wood screws in hard wood. The 2500 R.P.M. unit is recommended for running nuts on long studs and similar applications.

Regular equipment consists of one each, bit and centering sleeve, for Nos. 6, 8 and 10 screws and a clutch-adjusting spanner.

MOTOR: Universal D.C. or A.C. 25 to 60 cycles. VOLTAGES: 115, 125, 220/230, 250.

CLUTCH: Patented "Adjustomatic" roller, selective torque.

BEARINGS: Ball bearing throughout. GEARS: Heat-treated alloy steel.

SWITCH: Double pole, with lock - automatic trigger release.

CHUCK: Quick change 1/4" Hex.

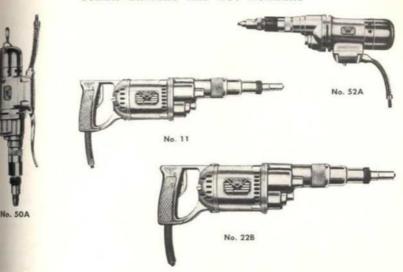
CORD and PLUG: Ten feet of three conductor heavy duty cord with plug.

		rocity	No Lood Speed	0 =0 =0		100	Wide
	Mach screws	Wood screws	R.P.M.	Length overall	Net weight	Code	
No. 420	1/4"	+10 - 11/4"	1600	1214"	3 3/4 lbs.	DUGAN	\$6
No. 430	+10	#10 134"	2500	1214"	3 34 lbs.	DUHET	6
No. 440	1/4"	#12 - 11/5"	800	1236"	4 lbs.	DUIRO	6
No. 445	3/4"	#12 - 155"	500	12%	4 lbs.	DUJAR	1
No. 1025	Universal 25	Angle Attachment				DELRY	- 1
No. 1033	Universal 90°	Angle Attachment				DEIGO	3

Complete assortment of Bits and Sockets for any application available. See page 117 for Nos. 3160 and 3344
Stands for bench operation of these drivers. Units equipped with reversing switches, \$7.50 extra.



SCREW DRIVERS AND NUT RUNNERS



he screw drivers and nut runners on this and the preceding page with the diversity of speeds provided and power available will handle any application within their rated capacities. Above all they are particularly valuable where sensitivity and uniformity of set are highly important.

The services of a corps of highly trained and experienced sales engineers are available to survey requirements and make recommendations as to the most efficient units to use and, when necessary, work out special fixtures to secure the desired results at a high rate of production.

The "Adjustomatic" Clutch is the smoothest acting, most easily adjusted and sensitive device of its led. No other clutch equals its performance. It's exclusive on Millers Falls Tools.

MOTORS: Universal for D.C. or A.C.— 25 to 60 cycles — 115, 220/230 and 250 volts.

QUICHES: Nos. 50A, 52A and 228 "Adjustomatic" selective torque. No. 11 adjustable double action.

MARS, PINIONS and SPINDLES: Heat-treated alloy steel.

ARINGS: Armature and main spindle ball bearing. Intermediate spindle bearings branze sleeve.

QUIPMENT: Nos. 50A and 52A — Bits and sleeves for Nos. 6, 8 and 10 Screws. No. 11 two bits and sleeves for Nos. 8 and 12 Screws. No. 228 two bits and sleeves for Nos. 12 and 16 Screws. Complete range of bits, sleeves and sockets available for all numbers.

WITCHES: Double pole, fully enclosed.

CORD: Ten feet of best rubber covered, Type S, three conductor with unbreakable plug.

_	Capacity Wood Screws	Capacity Mach. Screws	STANDARD N. L. Speed R.F.M.	SPECIAL N. L. Speed R.P.M.	Amps Full Load	Length overoll	Weight	Code	Price each
No. SOA	±10 — 1 ½"	#12	800	\$ 1200 2000	1.2	121/2"	4 % lbs.	DEMUN	\$68.00
No. 52A No. 11 No. 22B	#10 - 1 1/2" #16 - 2" #20 - 2 1/2"	#12 34" 34"	800 500 500	(3000 700-1000 700-1000		121/2" 161/2" 181/2"	4 1/6 lbs. 7 lbs. 9 1/4 lbs.	DENIG DELIA DELIB	62.00 78.00 92.00

Reversing switches, installed, \$5.00 extra. No extra charge for special speed.

For Stands, see page 117



DOUBLE END BLOCK PLANE

This combination plane has two throats and two cutter seats. As illustrated it is an ordinary block plane but when the cutter iron and lever cap are set up in the seat at the other end it becomes a bull-nosed rabbet plane.



Standard Angle

Bottom and sides nicely polished with inside and lever cap black enameled. Rosewood knob handle, Solid tool steel cutter iron. Nickel plated clamp screw.

M Code Price nock
os. EDFEN \$3.30

RABBET AND FILLISTER PLANE



This Millers Falls Plane has every desirable feature in a rabbet plane built into it. It is equipped with two cutter seats — a rear seat for regular work with a lever adjustment of the blade for depth, and a forward seat for bull-nosed work.

The fence is adjustable on the steel arm. The steel arm and the fence can be used on either side of the plane as the work requires. When the arm and fence are entirely removed, the plane can be used for a wide variety of uses. A three-point spur and a depth gauge are also part of the equipment. The depth gauge can be removed entirely when desired.

Body of plane nicely finished in black enamel. Bottom and both sides accurately ground. Trimmings and small steel parts nickel plated.

Width Iron

81/2" 115" Packed one in a box

No. 85 Robbet

Weight 3 lbs.

EDMAN

Price sod \$5,40



ROUTER PLANES

Router Planes are designed to level off and smooth the bottoms of grooves or slots parallel to the working surface. Two screw holes are provided in the body so that wood bottoms can be attached for increasing the bottom area allowing large areas to be worked, or fences can be attached for following straight or irregular edges.

NO. 77 CLOSED THROAT ROUTER



Three cutter irons, "4" and "2" wide and a "/2" pointed smoother, are provided. Depth of cut is controlled by a screw adjustment. Two seats are provided for the cutters, front for regular work and rear for bull-nosed work. A fence which can be attached to the bottom for following straight or curved edges is regular equipment.

Battom nicely polished. Mahogany lacquered hardwood handles. Frame nickel plated.

No. 77

1/4", 1/2", 1/2" Point Packed one in a box

Weight 2 1/4 lbs.

FFRAD

\$5.30

NO. 67 OPEN THROAT ROUTER



Three cutter irons, ¼" and ½" wide and a ½" pointed smoother, are provided. Depth of cut is controlled by a screw adjustment. Two seats are provided for the cutters, front for regular work and rear for bull-nosed work. Throat can be closed for narrow work by installing attachment supplied. A fence which can be attached to the bottom for following straight or curved edges is regular equipment. Bottom nicely polished. Mahogany lacquered hardwood handles. Frame nickel plated.

No. 67

14", 1/2", 1/2" Point Packed one in a box

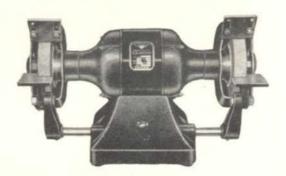
2 1/4 lbs.

EFRUE

\$6.50



HEAVY DUTY BENCH GRINDERS



This dependable line of grinders is equipped with new super-powered, precision-balanced motors, with extra fast capacitor starting with starting current requirements of less than 15 amperes and continuous induction run for steady, heavy duty service. Oversize, labyrinth sealed ball bearings insure trouble-free performance.

The new knee action tool rests give greater adjustability for straight or angle grinding. Heavier, safer, enclosed wheel guards are supplied. They are also wider to accommodate wire brush wheels

One coarse and one fine, high grade abrasive wheel regular equipment.

	H.P.	Voltages	Wheels	No Load E.P.M.	Weight	Code	Price 80
No. 76	1/3	110; 125; 150; 220; 250 50/60 cycle 1 phose	6 x 34 x 1/2"	3450	55 lbs.	NIBAC	\$ 54.5
No. 76	1/3	220/230 or 400/440 50/60 cycle 3 phase	6 x 1/4 x 1/2"	3450	55 lbs.	NIBEL	54.5
No. 76	1/3	115, 230 or 250 D.C.	6 x 34 x 1/2"	3450	60 lbs.	NIBUS	65.0
No. 77	1/2	110; 125; 150; 220; 250 50/60 cycle 1 phase	7 x 1 x 5%"	3450	80 lbs.	NIDAR	78.0
No. 77	1/2	220/230 or 400/440 50/60 cycle 3 phase	7 x 1 x %"	3450	80 lbs.	NIDEB	78.0
No. 77	1/2	115; 230 or 250 D.C.	7 x 1 x %"	3450	90 lbs.	NIDUG	90.0
No. 81	1	110 1 phase 50/60 cycle	10 x 1 x 34"	1725	155 lbs.	NIKAS	120.0
No. 81	1	220 or 440 3 phase 50/60 cycle	10 x 1 x 34"	1725	155 lbs.	NIKED	126.0
No. 81	1	550 3 phase 50/60 cycle	10 x 1 x 34"	1725	155 lbs.	NIKOP	120.

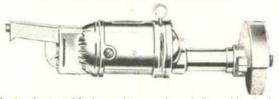
Single phase grinders are equipped with heavy duty switch and 10 feet of rubber covered cord. Three phase grinders are equipped with a heavy duty switch but no cord.

Nos. 76 and 77 can be supplied with heavy steel guards at slight additional cost.

For Grinding and Wire Brush Wheels, see pages 76 and 126.



PORTABLE ELECTRIC GRINDERS



Designed throughout and powered for heavy duty snagging, grinding welds, wire brushing, removing rust, scale and grinding off rivets, pins, bolts and similar operations. Totally enclosed motors exclude injurious dust and grit.

MOTORS: Universal for D.C. or A.C.- 25 to 60 cycles - 115, 220/230 and 250 volts.

GEARS, PINIONS and Spindles: Heat-treated alloy steel

BEARINGS: Oversize ball bearings throughout SWITCHES: Double pole, fully endosed, WHEELS: No. 406B. High grade 6 x 1 x 1/4" No. 461 Bakelite bonded 6 x 1 x 1/4"

CORD: Ten feet of rubber covered, Type S, three conductor with armored plug.

	Dismeter	NJ. Speed RPM	Ampy Full Load	Length	Weight	Code	Frice equi
No. 406B	6"	3700	6.0	231/2"	23 1/4 lbs.	TRUMP	\$110.00
No. 461	6"	5500	6.0	231/2"	23 % lbs.	TRUYT	110.00
Extra Wi	heels, No. 40	68. \$3.75; N	o. 461. Bonded	\$5.00 each	Other accessorie	s, see popes 76	and 117

HIGH SPEED HAND GRINDER





A light, compact tool essential in every toolroom or die shop for grinding clearances, shrinkage corrections, contouring, grinding cavities, profiling, etc. Motor and spindle housing made of tough moulded Bakelite making a cool tool easily operated with one hand

MOTORS: Universal D.C. or A.C.— 25 to 60 cycles — 115, 220 230 and 250 volts

CHUCKING CAPACITY: Collets 1/2" to 1/4" diameter

EQUIPMENT: Three wheel extensions, ¼" arbor, ½" collet chuck; ½" chuck arbor, ½" extension arbor 1½ x ½ x ¼" and ½ x ½ x ½" grinding wheels, 3 mounted wheels and chuck wrench all packed in a wooden box

CORD: Ten feet of best rubber covered, Type SJ, three conductor with plug

-		RP M	Length overall	Weight	Code	Price each:
No.	3068	18,000	11"	2 1/4 lbs	TRUTH	\$40.00
No.	6030	Lathe Adapter \$5.00 h	No. 6131 Milling Machine	Adapter for ¾, 1, 1 ¼	" Spindles \$1.50	2 00

ACCESSORIES FOR BENCH GRINDERS

-		Fitting	Weight	Code	Price each
No. 867	Plain Shatterproof Eye Shields	All	1 % lbs.	DORPA	Pair \$ 3.00
No. 8610	De Luxe Illuminated Eye Shields	All	3 1/4 lbs.	DOSSY	7.50
No. 7600	Cast Iron Floor Pedestal with water pot	60,76	78 34 lbs.	DUDET	23.00
No. 7700	Cast Iron Floor Pedestal with water pot	77	80 34 lbs.	DUFOX	23.00
No. 8100	Cast Iron Floor Pedestal with water pot	81	105 lbs.	DUKAT	27.50
No. 7080	Twist Drill Grinding Attachment	60, 76, 77	4 % lbs.	DYDAB	21.75
No. 7086	Recessed Grinding Wheel 6 x 1 x 1/2"	60,76	2 1/s lbs.	DYCEL	3.60
No. 7087	Recessed Grinding Wheel 7 x 1 x 1/4"	77	2 % lbs.	DYFOM	4.20
No. 7088	Diamond Point Wheel Dresser		1/a lbs.	DYJAK	5.50

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POLISHERS, SANDERS AND GRINDERS





No. 775



Nos. 900, 990

These versatile tools are designed for cleaning, waxing, rubbing, polishing, sanding, wire brushing and grinding on a great variety of production operations as well as maintenance and repair.

No. 27 Polisher is a light, compact tool specially designed for cleaning, rubbing, waxing and polishing to produce high lustre finishes. Its speed is selected to perform these operations efficiently, and without damage in the shortest possible time.

Nos. 775 and 900 are powerful production tools equipped with 7 inch pads which can be replaced with cup grinding wheels or cup wire brush wheels.

No. 990 is a heavy duty unit powered for heavy sanding, polishing, wire brushing, stone surfacing and grinding requirements.

A resilient, shock absorbing coupling, exclusive in these tools, minimizes vibration and greatly increases their life.

MOTORS: Universal for D.C. or A.C.- 25 to 60 cycles -- 115, 220/230 and 250 volts.

PADS: Patented, super-flexible. SIDE HANDLES: Reversible. GEARS, PINIONS and SPINDLES: Heat-treated alloy steel.

BEARINGS: Precision, grease sealed ball bearing throughout.

SWITCHES: Double pole, fully enclosed. Underwriter approved.

CORD: No. 27. Ten feet high grade, rubber covered, three conductor, Type S, with unbreakable plug. All others

15 feet best rubber covered, three conductor, Type S, with unbreakable plug.

	Dion. Disc	Rufing	No Load R.P.M.	Amps. Full Load	Weight	Code	Price each
No. 27	7*	Special	1600	3.5	8 1/4 lbs.	TAMOX	\$65.00
No. 775	7"	Standard	4600	6.5	13 34 lbs.	TECUL	78.00
No. 900	7"	Heavy Duty	4600	8.0	1.5 1/2 lbs.	TEFAX	90.00
No. 990	9"	Standard	3850	8.0	16 3/s lbs.	TRYMO	90.0

For partial list of Accessories, see page 126



ELECTRIC SAWS



New



Powerful. Compact

lese are powerful, heavy duty tools for continuous production work, ripping or cross cutting to their If rated capacity in hard or soft wood. They can also be used for cutting metals, stone, concrete, and many composite materials by employing the saws or abrasive discs specially developed for base applications. They are nicely balanced and easy to control. The telescoping saw guard provides maximum safety.

Quick, easy adjustment of depth of cut from zero to full capacity is made by simply loosening the handle and rotating the motor in the frame, elevating or dropping the saw to the desired depth. ingle adjustments are made by loosening the front binder lever at the front and setting at the desired agle on the quadrant from 0 to 45°.

The same cutting guide is used for all angles and the work line is kept clear by a strong air blast. A sturdy, adjustable ripping guide is regular equipment.

For use at a distance from nearest power connection the following gauges of extensions are *commended: 50 feet 12 gauge; 100 feet 10 gauge, and 200 feet 8 gauge.

MOTORS: Universal for D.C. or A.C. up to 60 cycles.

OLTAGES: 110/115V Standard. 220/230V and 250V also available.

ARS: Precision cut and hardened, helical, alloy steel gears.

ARINGS: Precision ball bearings throughout.

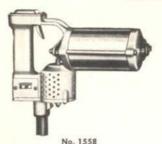
STANDARD EQUIPMENT: One high quality standard combination saw blade, 15 feet of heavy duty three conductor cord with plug, rip guide, flange spanner, hex key for arbor screw and a rugged, lacquered metal corrying case.

	Diam.	Maximum	Cut		Speed N.L.	We	light.		
	Sow	Rt. Angle	45	H.P.	E.P.M.	Net	Shipping.	Code	Price wach
No. 850 No. 1050	9"		2%*	1 1/4	4000 3800	20 ½ lbs. 22 ¾ lbs.	42 ½ lbs. 44 ½ lbs.	SUTO	\$152.00 180.00

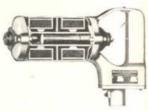
Each tool packed in a substantial, nicely finished metal carrying case in a corrugated container



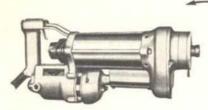
ELECTRIC HAMMERS







No. 1716 Sectional View



No. 4016



Nos. 2516 and 3216

Millers Falls Hammers have only one moving part — the internal solid steel hammer head which strikes 3600 powerful blows per minute, actuated by powerful electro magnets. There are no motors gears, shafts or bearings to wear out, under the constant vibration. They are long lived, dependable and trouble free.

No. 1558, superseding the old No. 1058, is completely self-contained with the rectifier unit but into the handle. Plugs directly into the nearest 110 volt A.C. outlet to operate.

No. 4016 is an entirely new tool which automatically rotates the drill bit. A suitable dutch mechanist is included to prevent bit breakage in case of binding. It is the fastest cutting hammer made using carbide tipped, spiral drills.

Nos. 2516, 3216 and 4016 have built-in power cooling units.

	Coposity	KW	Length	Weight	Code	Price
No. 1558	5/4"	.155	10"	11 lbs.	ACFGK	\$115
No. 1716 No. 2516	11/2"	.355	1534"	17 lbs. 22 lbs.	AGILO	210
No. 3216	2*	1.000	151/2"	25 lbs.	AMOQT	240
No. 4016	2"	1.650	18"	38 1/2 lbs.	ANITA	295

Prices above are for 110 volt, 60 cycle, A.C. units. For 220 volt, add \$10.00. For 50 cycle, 110 or 220 add \$10.00. For 25 cycle, 110 or 220 volt add \$20.00.



ELECTRIC HAMMER TOOLS



HIGH GRADE STANDARD ROUND SHANK TOOLS

ì	Tool	Fitting No. 1558	Price each	Fitting all others	Price each
1	Buhr Stone Drilling Chisel (Toothed)	No. 1L	\$3.50	No. 1H	\$5.00
2	Buhr Stone Dressing Chisel (Plain)	No. 2L	3.00	No. 2H	4.00
3	Round Nose Chipping Chisel	No. 3L	2.40	No. 3H	3.60
1	Bush Hommer	No. 4L	6.00	No. 4H	8.00
5	3/4 Inch Wood Chisel	No. 5L	6.00	No. 5H	7.00
6	Mortar Cutting Chisel	No. 6L	3.00	No. 6H	4.00
7	Calking Tool	No. 7L	3.25	No. 7H	4.25
ä	Scaling Chisel	No. 8L	3.00	No. 8H	3.50
9	Brick Cleaning Chisel	No. 9L	4.00	No. 9H	5.00
6	2 Inch Cutting Chisel	1,000	37,404	No. 10H	4.00
î.	Cold Chisel	No. 11L	2.00	No. 11H	2.50
2	Stone Point	No. 12L	2.00	No. 12H	2.50
3	Cape Chisel	No. 13L	3.00	No. 13H	4.00
6	Beading Tool	140. 150	0.00	No. 16H	5.75

and a	NO. 1	4 DIAMOND	POINT, NO.	IS STAR	AND NO.	IV IKI-FORM	DKILLS	
Lingth	Diom. 1/4"	3/16"	%'	3/16"	1/2"	9/16"	%"	34"
6" 9" 12" 18" 24"	\$0.55 .60 .70	\$0.55 .60 .70	\$0.55 .60 .70 .85	\$0.55 .60 .70 .85 1.05	\$0.60 .70 .80 .85	\$0.60 .70 .80 .85 1.05	\$0.70 .85 .95 1.05 1.25	\$0.85 1.05 1.10 1.20 1.40
engen	Diam. 36"	1*	156"		156*	198"	155"	2"
12"	\$1.25 1.45 1.65	\$1.25 1.45 1.65	\$1.35 1.60 1.80		2.00 2.50 3.00	\$2.50 3.00 4.00	\$3.00 4.00 5.00	\$5.00 6.00 7.00

Specify Hammer No. drills are to fit. Tri-point Drills in 6 inch and 12 inch lengths only

CARBIDE-TIPPED TRI-POINT DRILLS

ange.	Dion. %"	16"	56.1	36"	76"	1*
6"	\$6.00	\$7.00	\$8.50	\$11.00	\$14.00	\$16.00

Carbide-tipped Spiral Drills also available for No. 4016



PARTIAL LIST OF ACCESSORIES

FOR POLISHERS, SANDERS AND GRINDERS PA	AGE 1	122
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		Fitting Nos.	Price and
No. 7077	7" Abrosive Discs — fine, medium or coarse	All	
No. 9099	9" Abrasive Discs - fine, medium or coarse	990	\$0.4
No. 9009	Abrasive Disc Cutter	7.74	.51
No. 30231	7 1/2" Carpet Pile Pad	27, 775, 900	8.00
No. 3972	4" Cup Grinding Wheel	775	1.50
No. 3975	6" Cup Grinding Wheel, flared	900, 990	4.00
No. 8093	7" Felt Rubbing Pad	27, 775, 900	5.29
No. 8094	9" Felt Rubbing Pad	990	1.50
No. 705	5° Flexible Pad	27,775	2.00
No. 507	7" Flexible Pad "D2"		5.50
No. 909	9" Flexible Pad "D29"	27, 775, 900	6.50
No. 277		990	8.00
	7" Lamb's Wool Bonnet	27, 775, 900	2.30
No. 8098	9" Lamb's Wool Bonnet	990	3,20
No. 22995	7" Sponge Rubber Cushion Pad	27, 775, 900	1.00
No. 9090	Suspension Strap, complete	990	1.00
No. 775	Suspension Spring	990	1.00
No. 4208	3 1/4" Wire Cup Brush, 1/2 or 1/4" Bushing	775, 900, 990	3.35
No. 4207	4 34" Wire Cup Brush, 34" Bushing	900, 990	4.30
No. 7678	5 34" Wire Cup Brush, 1/4" Bushing	900, 990	4.85
No. 9091	%-11" Wire Cup Brush Spindle Nut	775, 900, 990	.50

FOR DRILLS PAGES 110 TO 116

		For Drills Nos.	Price stat
No. 88	Auxiliary Side Handle	414, 514, 516, 638	\$ 1,71
No. 1518	Wheel Arbor, 1/2" fitting 1/4" Chucks		,E
No. 1523	Wheel Arbor, 1/2" fitting 1/2" Chucks		1.70
No. 1524	Feed Screw or "Old Man"	312, 658, 734, 801	6.0
No. 1522	Carbon Cleaning Brush	All	1.2
No. 1034 1/2	1/2" Cap. Jacobs Key Chuck	801	10.0
No. 1034 1/2	1/4" Cap. Jacobs Key Chuck	801	11.0
No. 1034 34	34" Cap. Jacobs Key Chuck	108	14.0

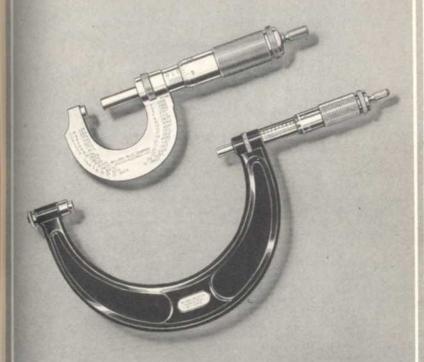
Hole Saws, see pages 95 and 96

FOR BENCH GRINDERS PAGES 109 AND 120

		Grain and Grade	Fitting Nos.	Price and
No. 1027	1/2" Straight Spindle R.H. Thread only		60,76	\$3.50
No. 536	Taper Thread Spindle R. or L. Thread		60,76	4.39
No. 537	Taper Thread Spindle R. or L. Thread		77	4.4
No. 1039	3/4" Drill Chuck with Spindle		60,76	4.1
No. 1513	1/2" Drill Chuck with Spindle		77	4.5
No. 1519	Grinding Wheel 4 x 1/2 x 1/2"	60-M	60, 76	1.1
No. 636	Grinding Wheel 6 x 1/2 x 1/2"	36-0	60,76	2.0
No. 660	Grinding Wheel 6 x 1/2 x 1/2"	60-M	60.76	2.0
No. 675	Grinding Wheel 6 x 34 x 1/2"	60-M	60,76	2.3
No. 685	Grinding Wheel 6 x 34 x 1/2"	36-0	60-76	2.3
No. 760	Grinding Wheel 7 x 1 x 1/4"	60-M	77	3.0
No. 736	Grinding Wheel 7 x 1 x 1/6"	36-0	77	3.0
No. 1036	Grinding Wheel 10 x 1 x 34"	36-0	81	6.9
No. 1060	Grinding Wheel 10 x 1 x ¾"	60-M	81	6.9
No. 2036	Grinding Wheel 10 x 1 ¼ x ¾"	36-0	81	8.0
No. 2060	Grinding Wheel 10 x 1 1/4 x 3/4"	60-M	81	8.0

For Wire Brush Wheels, see page 76

PRECISION TOOLS

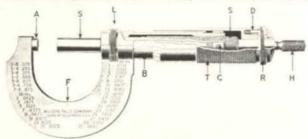






MICROMETER CALIPERS

The micrometer is the precision tool in most general use where measurements in thousandths or even 1 10000 of an inch are necessary. They are made in many styles and capacities for outside, inside, and depth measurements. While their construction is comparatively simple, the utmost care must be used in every step of their manufacture if extreme accuracy and dependability are to be secured. Adjustments for wear must be provided so that the accuracy of the instrument can be maintained.



THE FRAME

The frames (F) are steel forgings of good proportions and designed to secure the strength and rigidity that is essential. In the larger and a few of the smaller sizes the frames are forged in I beam form to secure rigidity without undue weight.

THE BARREL

The barrel (B) carries the threaded steel bushing in which the micrometer or lead screw runs and is part of the forged frame. The threaded bushing has an adjustable collar (C) for taking up any wear at this point. One inch, divided into 40ths, is graduated on the barrel, each graduation representing one revolution of the lead screw.

THE SPINDLE AND LEAD SCREW

The spindle and lead screw (S) in all Millers Falls micrometers is made of one solid piece of very fine tool steel carefully hardened and tempered. It is accurately machined and then allowed to season for months before the lead screw is ground in and the spindle lapped. This precaution is taken to avoid shrinkage of the finished screw and spindle. All machine operations are within extreme precision limits on machines specially developed and perfected for the purpose.

THE ANVIL

The anvil (A) is set in the frame in perfect alignment with the spindle. The faces of both the anvil and spindle are lapped with the utmost care so that they are at right angles to their axis and parallel to each other. Proper adjustment for wear of the anvil is provided.

THE THIMBLE

The thimble (T) is rigidly fixed to the lead screw and spindle and fits down over the barrel but does not touch it. The slightest turn of the thimble results in a similar movement of the lead screw. The beveled end of the thimble is graduated into 25 equal divisions.

RATCHET STOP

The ratchet stop (R) mechanism can be easily operated by the thumb and forefinger of the same hand that holds the micrometer. This leaves one hand entirely free for holding the work to be "miked." This new departure from the old practice of combining the ratchet stop with the speeder of



the end of the thimble has proven very popular because it is both convenient and speeds up work. The tension in the ratchet mechanism is nicely adjusted so that when the knurled ratchet ring is turned tratchets when just the right amount of pressure is exerted on the spindle to give accurate readings. The ratchet stop insures uniformly accurate readings as it entirely eliminates the personal equation.

THE SPEEDER

A knurled handle (H) of small diameter, provided on all outside micrometers, is fixed to the end of the thimble. By turning this speeder between the thumb and forefinger the spindle can be run in arout very rapidly as required.

SPINDLE LOCK

A spindle lock (L) is provided on many sizes. This lock is controlled by turning a knurled nut located in the frame. A slight turn of the nut locks the spindle securely, preserving the setting at any desired spint.

ACCURACY, WORKMANSHIP AND FINISH

The extreme care with which Millers Falls Micrometers are made, the special precision machinery used, the highly skilled craftsmen employed, and the pride taken in the product, permit us to recommend and guarantee the accuracy, workmanship and finish of this fine line, no matter how exacting the requirements may be.

HOW TO READ A MICROMETER

To the frame (F) is immovably fixed the barrel (B). On the inside of this barrel is a very accurately threaded bushing with a pitch of 40 threads per inch. The hidden portion of the spindle (S) is also breaded with 40 threads per inch and runs in the nut formed by the barrel (B).

The extreme right end of the spindle (S) is securely fastened to the thimble (T). These are the only moving parts and they move in unison.

An inch of the line on the barrel (B) parallel to its axis is graduated into 40 equal parts corresponding exactly to the threads per inch on the screw of the spindle (S). When the thimble (T) is given one complete rotation the spindle must move just one graduation, or 1, 40 of an inch, which is 25/1000 of an inch. The beveled edge of the thimble (T) is divided into 25 equal graduations; each of these must, therefore, represent 1/25 of 1/40 of an inch, or 1/1000 of an inch. The instrument is so graduated and adjusted that when the face of the spindle (S) just touches the fixed anvil (A) the 0 graduation on the thimble (T) exactly coincides with the 0 graduation on the barrel (B).

To get the measurement between the fixed anvil (A) and the face of the spindle (S), multiply the number of divisions visible on the barrel (B) by 25 and add the number of divisions on the thimble (T) from 0 to the graduation opposite the longitudinal line on the barrel (B).

To facilitate reading, every fourth graduation on the barrel (B) is numbered, 1, 2, 3, 4, etc., the figure representing respectively 0, .100", .200", .300", .400", etc. For the same reason every fifth division on the thimble graduation is numbered.

READING TEN-THOUSANDTHS MICROMETERS

Micrometers that read to one ten-thousandths of an inch have exactly the same graduations as those reading to one-thousandths, with the addition of a vernier reading to 1/10 of the 1/1000 graduations.

There are ten vernier divisions which run the entire length of the barrel (B) and are numbered on the top of the frame, as shown in the cut of the No. 902R. These ten vernier divisions correspond exactly to nine of the divisions on the thimble (T). So that the number opposite the line on the vernier that exactly corresponds with a line on the thimble graduations gives the number of ten-thousandths of an inch the micrometer has been opened beyond the last .001 inch graduation.



NO. 112R MICROMETER



Capacity O to 1 Inch Ratchet Stop Spindle Lock Speeder

The frame of this fine micrometer is made of drop forged steel beautifully polished with decimal equivalents clearly etched on one side. The anvil side is cut away which permits taking many measurements otherwise impossible.

The precision ground lead screw and spindle are made of one piece of fine, carefully hardened tool steel. The lead screw runs in a threaded bushing in the barrel which can be adjusted to compensate for the slightest wear. The smooth action ratchet mechanism is located on the thimble where it can be easily reached by the operating hand. The speeder is located on the end of the thimble. The spindle locking device is set in the frame and is used for preserving a measurement or for setting the spindle when the mike is used as a gauge.

The faces of the anvil and the spindle are precision lapped and tested for exact parallelism to insure uniformity of readings.

Measures from 0 to 1 inch by 1/1000 inch.

Each micrometer packed in a slide cover, lock cornered wood bax

NO. 38R MICROMETER HEAD



Capacity O to 1 Inch Ratchet Stop Speeder

These heads can be built into special gauges and fixtures and mounted on machines for making precision measurements, settings or adjustments.

The one-piece precision ground lead screw and spindle, the barrel, thimble, ratchet stop and speeder are exactly the same as used on the No. 112R above.

Range 0 to 1 inch by 1/1000 inch.

No. 38R Capacity

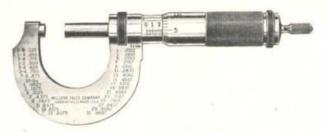
Y .

Weight 3 azs. Packed one in a box YADAB

\$7.50



NO. 902R MICROMETER



Capacity 0 to 1 Inch by 1/10000 Inch

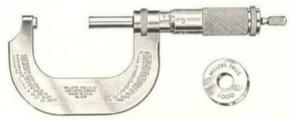
The same fine instrument as the No. 112R on the preceding page but provided with a vernier etched on the barrel permitting direct readings in 1/10000 inch when desired. Equipped with ratchet stop, speeder and spindle lock. Decimal equivalents etched on the drop forged frame.

Measures from 0 to 1 inch by 1/10000 inch.

	Copacity	Weight	Code	Price each
No. 902R	0 to 1"	8 ozs.	ZIABX	\$16.00
Total Control of the Control of			WYDDA	2.30

Each micrometer packed in a slide cover, lack cornered wood box

NO. 20R MICROMETER



Capacity 1 to 2 Inches Ratchet Stop Spindle Lock Speeder

This is exactly the same fine micrometer as the No. 112R on the preceding page but with larger frame to give a capacity of one to two inches. A precision ground, one inch disc standard, as illustrated, is supplied with each micrometer for checking the setting whenever desired.

Measures from 1 to 2 inches by 1/1000 inch.

 Coposity
 Weight
 Code
 Price each

 No. 20R
 1 to 2"
 12 ozs.
 WYUHM
 \$15.00

 Leatherette covered case
 WYUSY
 2.95

Each micrometer packed in a slide cover, lack cornered wood box



OUTSIDE MICROMETERS



Forged Frames Ratchet Stops Spindle Locks Speeders

This new line of micrometers with abony enameled, drop forged steel frames combines every feature desirable to make it the finest of its type.

The design of the frame gives great rigidity and strength. The anvil side is cut away to permit measurements in confined spaces.

The precision ground and hardened lead screw and spindle are made of one piece of fine tool steel. The sensitive ratchet stop is on the thimble within easy reach for one hand "miking." The speeder is located on the end of the thimble while the spindle lock is set in the frame.

The faces of the anvil and spindle are precision lapped to exact parallelism. Proper adjustments for the slightest wear are provided.



0 TO 1 INCH MICROMETER

Specificati		Measures	from 0 to
No. 701R Leatherette	O to 1 "	 KABOX WYDDA	\$10.50

1 TO 2 INCH MICROMETER

Specifications as above. Measures from 1 to 2 inches by 1/1000 inch.

No. 712R	1 to 2"	10 ozs.	KABUW	\$11.50
Leatherette	covered co	ise	WYUSY	2.95

2 TO 3 INCH MICROMETER

Specifications as above. Measures from 2 to 3 inches by 1/1000 inch. Copporty 2 to 3" Weight No. 723R \$12.50 12 ozs KABYZ Leatherette covered case WYNEO

3 TO 4 INCH MICROMETER

Specifications as above. Measures from 3 to 4 inches by 1/1000 inch.

No. 734R	3 to 4	1 1/s lbs.	KACAB	\$13.50
Leatherette	covered	case	WYVUV	6.30

4 TO 5 INCH MICROMETER

Specifications as above. Measures from 4 to 5 inches by 1/1000 inch.

	Capacity.	Weight	Code	Frice each
No. 745R	4 to 5"	1 3/4 lbs.	KACAT	\$14.75
Leatherette	covered ca	se	WYPIR	8,20

5 TO 6 INCH MICROMETER

Specifications as above. Measures from 5 to 6 inches by 1/1000 inch No

. 756R	Copacity 5 to 6"	Weight 1 ½ lbs.	Code	\$15.75
otheratte	envered on		WYDID	g 20

Cases are made on a wood frame nicely lined with plush and covered with imitation leather-Substantial lock and hinges. Each of the above micrometers packed one in a slide cover, lock cornered wood box. Weights given are shipping weights.



MILLERS FALLS TOOLS

Drop Forged Frames Decimal Equivalents Speeders

The ebony enameled, drop forged frames of these micrometers are ribbed for maximum strength and rigidity without undue weight. They have the cutaway feature on the anvil side.

The precision ground lead screw and spindle are made from tool steel carefully hardened. The lead screw runs in an adjustable threaded bushing in the barrel. The thimble has decimal equivalents clearly stamped on it and a speeder is provided on its end.

The faces of the anvil and spindle are precision lapped to exact parallelism.

0 TO 1 INCH MICROMETER

Specifications as above. Measures from 0 to 1 inch by 1/1000 inch.

	Copocity	Weight	Code	Price each
No. 701	0 to 1	6 ozs.	KEBAS	\$8.50
Leatherette	covered case		WYDDA	2.30

1 TO 2 INCH MICROMETER

Specifications as above. Measures from 1 to 2 inches by 1/1000 inch.

	Copocity	Weight	Code	Price each
No. 712	1 to 2"	10 ozs.	KEBEM	\$9.50
Legtherette	covered car	se	WYUSY	2.95

2 TO 3 INCH MICROMETER

Specifications as above. Measures from 2 to 3 inches by 1/1000 inch.

No. 723	Capacity 2 to 3"	Weight 12 ozs.	Code KEBIT	\$10.50
Leatherette	covered co	se	WYNRO	5.50

3 TO 4 INCH MICROMETER

Specifications as above. Measures from 3 to 4 inches by 1/1000 inch.

W	Copocity	Weight	Code	Frice each
No. 734	3 to 4"	1 1/a lbs.	KEBOL	\$11.50
Leatherette	covered ca	589	WYVUV	6.30

4 TO 5 INCH MICROMETER

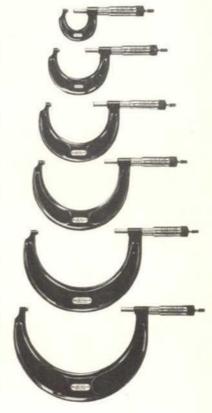
Specifications as above. Measures from 4 to 5 inches by 1/1000 inch.

No. 745	Capacity 4 to 5"	Weight 1 1/2 lbs.	Code KEBUF	\$12.75
Leatherette	covered co	ie.	WYPIR	8.20

5 TO 6 INCH MICROMETER

Specifications as above. Measures from 5 to 6 inches by 1/1000 inch.

No. 756	Copedity	Weight	Code	Frice each
	5 to 6	1 ½ lbs.	KEBYD	\$13.75
Leatherette	covered ca	se	WYPIR	8.20



Cases are made on a wood frame nicely lined with plush and covered with imitation leather. Substantial lock and hinges. Each of the above micrometers packed one in a slide cover, lock cornered wood box. Weights given are shipping weights.



New

No. 704R

No. 563

NO. 704R MICROMETER SET



Capacity O to 4 Inches Ratchet Stop Spindle Lock Standards

The frame of this wide range micrometer is drop forged steel proportioned and ribbed for maximum strength and rigidity.

The spindle and precision ground lead screw are made of one solid piece of fine tool steel carefully hardened and tempered. It runs in a threaded bushing in the barrel which has a fine adjustment to compensate for the slightest wear. The thimble is equipped with a sensitive, smooth-acting ratchet stop mechanism and a speeder. The spindle locking device is operated by a knurled ring set in the frame.

Four interchangeable anvils which are held in the frame by a knurled thumb nut are supplied. The faces of these anvils and the spindle are precision lapped to exact parallelism. Three precision standards, described below, are also provided for checking the mike when anvils are changed.

Frame nicely black enameled, all other exposed metal parts beautifully polished.

Measures from 0 to 4 inches by 1/1000 inch.

Copacity 0 to 4" Weight 3 lbs. YEMOX Free each \$25.70

Each set packed in a handsome walnut case



3" rod

YUJYO

NO. 563 MICROMETER STANDARDS

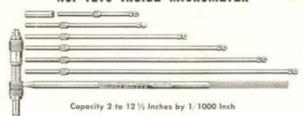
Code

These standards are made of tool steel, hardened and polished. The one inch standard is a round disc. All other sizes are rods with their faces precision lapped. The rods are equipped with hexagonal hard rubber grips to protect them from body heat and prevent rolling.

Price each		Coposity	Code	Free each
\$2.00	No. 563	4 rod	YUKAV	\$3.20
2.50	No. 563	5" rod	YUKCY	3.50
3.00	No. 563	6" rod	YUKEP	3.75



NO. 1218 INSIDE MICROMETER



The head of this fine instrument is provided with a precision ground and hardened spindle and lead sarew with a $\frac{1}{2}$ inch run. Seven easily interchangeable rods with hardened anvils in one end are provided. These anvils are adjustable to compensate for the slightest wear. The shanks of the rods are slipped directly into the end of the spindle until the collar comes to a positive seat. This contact can be easily kept free from dirt or dust and is a valuable feature for that reason. The rods are locked by tightening the knurled chuck nut.

Two hardened steel collars, exactly $\frac{1}{2}$ and 1 inch in length, that slip over the shanks of the rods are provided and are used in various combinations. Two sets of graduations are provided on the barrel so that direct readings can always be made no matter what combination of rods and collars are in use. Complete instructions are packed with each micrometer. A long handle that screws into the head is provided for making measurements otherwise inaccessible.

Entire tool beautifully polished.

	Capacity	Weight	Code	Price each
No. 1218	2 to 121/2"	34 lb.	ZISTA	\$14.50
leatherette case			ZISTO	5.05

Packed one micrometer in a wood bax



MICROMETER DEPTH GAUGES

Capacity 0 to 3 Inches by 1 1000 Inch

Designed to make accurate measurements of the depth of holes, slots, shoulders and projections. The spindle has a full one-inch movement and is graduated to read by 1/1000 inch.

Three measuring rods with hardened ends, carrying an adjusting device to compensate for wear, give a capacity of 0 to 3 inches. The rods are inserted through a hole in the lead screw by removing the knurled end nut on the thimble. They are brought to a positive bearing against a finished seat on the end of the lead screw. This gives a positive end contact that does not depend on any device liable to be lost or worn and without rods projecting above the top of the thimble.

The base is 17/32 inch wide, hardened, ground and accurately hand lapped at right angles to the rods.

Copocity	Weight	Code	Price each
0 to 3"	6 ors.	YAALC	\$12.50
0 to 3"	8 ozs.	YAAWN	16.00
		YAASK	3.05
		VARIT	3.70

Packed one depth gauge in a wood box

Extra set of 3 rods for measurements 3 to 6 inches

Extra set of 6 rods for measurements 6 to 12 inches

10.50



PRECISION STEEL RULES

The standards to which all Millers Falls Rules are made are among the finest in existence, and are checked at intervals with the standards of the United States Bureau of Standards at Washington. Every Millers Falls Rule is as perfect a reproduction of these standards as skilled mechanics and precision machinery can produce, and we guarantee them to be as close to absolute accuracy as it is possible, commercially, to make them.

The steel used is a fine quality of carefully heat-treated crucible steel. They are ground and polished to a beautiful satin finish, and precisely graduated on dividing engines developed and perfected over a period of nearly sixty years by our own engineers. The graduation lines are of different lengths and sharply and uniformly etched, making them very easy to read correctly. The figures are deeply etched, of good size, and shaded for legibility.

Light and semi-flexible tempered rules and square blades are graduated on all four edges in No. 4 graduation — 8ths, 16ths, 32nds and 64ths of an inch. Flexible and narrow rules and depth gauge blades are graduated on two edges in No. 10 graduation — 32nds and 64ths of an inchexcept No. 106.

LIGHT TEMPERED RULES

SERBOOK T		DEFEL 3			
polynamic colemn.	4747417441777	AND CONTRACTOR	Service Colonial	ARREST AREAST.	alabatatatatata

Numbered for Quick Reading

Graduated full length in 8ths and 16ths of an inch on one side and 32nds and 64ths of an inch on the other. For fast, positive reading the 32nds and 64ths graduations are numbered every 8th of an inch. No end graduations.

No. 866 No. 866 No. 866	6" 12" 18"	34" 1" 1"	1/20" 1/16" 1/16"	Weight Box 6 ½ ozs. 19 ozs. 27 ozs.	ZEPUL ZEPAT ZEPON	\$1.20 2.15 3.30
			Packed six in a h	20.8		

SEMI-FLEXIBLE TEMPERED RULE

Graduated full length on four edges in 8ths, 16ths, 32nds and 64ths of an inch. No. 253 is end graduated in 32nds of an inch.

No. 253 No. 255	6" 12"	Wides 3/6" 3/4"	1/50" 1/50"	Weight Box 3 ozs. 6 ½ ozs.	YIAWY YIBCA	\$1.20 2.00
			Parkad six in a ha			



YIDGE

Price each

\$1.20

FLEXIBLE TEMPERED RULE

Graduated full length on two edges, on one side only in 32nds and 64ths of an inch. Ends graduated in 32nds of an inch.

Weight Sox. Code Price each Length Thickness 1/100" YICFE No. 264 1 1/2 ors. \$1.20 Packed six in a box

NARROW TEMPERED RULE

1/20"

2 1/4 DZS.

Graduated full length in 32nds of an inch on one side and 64ths of an inch on the other,

Weight Box Wide Thickness Length

14" Packed six in a box

6"

No. 274

TEMPERED HOOK RULE

Numbered for Quick Reading

For taking measurements over rounded corners, through the hubs of wheels or pulleys, or for setting dividers, or inside calipers and many other uses. The hardened steel hook is locked on by an eccentric bolt and can be easily removed if desired. Graduated full length in 8ths and 16ths of an inch on one side and 32nds and 64ths of an inch on the other, with graduations numbered at every 8th of an inch.

Weight Box Code Price wach No. 966 6" 1/20" 1 1/2 ozs. ZUJO \$1.85 Packed one in a box

NARROW HOOK RULE



The hardened hook can be easily removed by giving the eccentric stud one half turn. Graduated in 32nds of an inch on one side and 64ths of an inch on the other.

Width Dickness Weight Box Code Price each 1/20" ZEAMD \$1.80 No. 771 6" 1 1/4 ozs.

Packed one in a box



NO. 106 FLEXIBLE STEEL RULE



A high grade, flexible six inch steel rule made of carefully heat-treated crucible steel with a fine ground satin finish on all faces. It is precision graduated on two edges in 16ths and 32nds of an inch. The figures are deeply etched and shaded for quick, easy legibility. Each rule is mounted on a card printed in red and black and packed in a cellophane envelope to protect it from moisture.

No. 106

Length 6"

34"

1/100*

Weight Sox 4 025.

WYUVA

\$0.60

MILLERS FALLS

SIR INCH

Pocked six in a box

NO. 20 VEST POCKET RULE

An extremely convenient, six inch precision steel rule for carrying in the vest pocket. It is equipped with a pocket clip which also acts as a base so that the rule can be used as a depth gauge.

Nicely finished and engine graduated. Both graduations and figures deeply etched for easy reading.

Graduated in 32nds of an inch on one side and 64ths of an inch on the other.

Each rule mounted on a card, as illustrated, and packed in a maistureproof cellophane envelope.

Length No. 20 6"

Width 34"

Thickness 1/20"

Weight Sox 4 025.

Code WYUCH Frice each

Packed six in a box

\$0.50



NO. 222 DOUBLE STEEL SQUARE

A precision toolmaker's square with three interchangeable blades that slide their entire length in the solid steel beam. The two wide blades can also be reversed so that the graduations can be placed on either side of the beam and the angles faced either up or down. Blades are locked at any desired position by turning the knurled thumb nut on the bottom of the beam.

The 2½ by ½ inch blade is graduated in 32nds of an inch on one edge and 64ths of an inch on the other. The beveled blade is ground to 30° at one end and 45° at the other. The narrow blade is 21/2 by 1/8 inch. All parts have a fine satin polished finish, clear etched graduations and figures-

Length Blodes No. 222

21/2"

Weight 3 021.

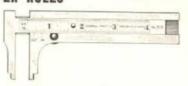
Code YISCO

\$5.20



SLIDE CALIPER RULES





he most popular and convenient measuring device available. Precision built in every detail it can be used as an ordinary rule or as an outside or inside caliper providing direct readings of the measurement taken. The rule graduations in 32nds of an inch are etched on one edge and the outside and mide graduations on the slide are in both 32nds and 64ths of an inch.

The slide can be locked at any point by tightening the knurled lock nut which is easily controlled by the thumb of the hand that holds the tool.

Nicely polished to a satin finish with clear, etched graduations and figures.

The same of	Length	Depth of Jows	Measurement	Weight	Code	Price each
No. 303	3"	1564	3/6"	2 ozs.	YIHLU	\$5.25
No. 305	5"	1 714"	1/4"	4 ozs.	YIHTO	6.50

NO. 80 RULE DEPTH GAUGE

he three inch steel base of this highly useful tool is precisely ground and itely polished. A vertical slot machined at 90° to the base accommotates the narrow tempered rule which is graduated on one side in 32nds and 64ths of an inch on the other. This rule runs through a friction pring-controlled clamp screw controlled by a knurled thumb nut on the three side.

by loosening the nut the rule is freed and can be either run up or down slot, or pivoted to any angle and used as an angle gauge. For purpose the base is accurately eithed in angle graduations for 30°, and 60° angles, both right and left.

and 60° angles, both right and left.

6"

Width Base Weight 1/4" 3" 2 ozs.

Code Price each
YAPUL \$2.50

" 3" 2 ozs. YAPUL \$2.5 Packed one in a box





Made of tempered crucible steel, ground and lapped to a light-tight fit with a 60° standard for sinding and setting screw cutting tools. Graduated on four corners in 14ths, 20ths, 24ths and 32nds of an inch for the number of threads per inch.

No. 438

10, 80

60°

Weight Box 1 ½ azs. Packed six in a box YOMAS

500

\$0.75



COMBINATION SETS



Hardened Steel Blades

These useful precision tools are essential to every machinist and toolmaker. They perform the functions of a wide variety of specialized tools. They can be used as a square, a depth gauge, a mitre, a rule, a protractor and a center finder all in one. They are provided with a beam equipped with a small level and a scriber, a precision protractor fully described on the following page, and a centering head. These can be moved and locked to any desired point on the blade or removed entirely.

The tempered blade is precision graduated; all graduation lines and figures being clearly etched and given a fine ground satin finish. The beam, protractor and centerhead have precision ground working faces and polished edges and ebony enameled webs.

Blade precision graduated on four edges in 8ths, 16ths, 32nds and 64ths of an inch.

	Length Blade	Weight	Code	Price exit
No. 390	9"	1 1/2 lbs.	YOERZ	\$8.30
No. 391	12*	1 % lbs.	YOEVD	9.00
		CONTRACTOR AND ADMINISTRATION OF THE PARTY O		

Packed one set in a box

COMBINATION SQUARES



Hardened Steel Blades

This is the same fine square as above but without the protractor which can be added whenever desired. The working faces of the beam and centerhead are precision ground, the edges polished and the webs abony enameled. The blade is tempered steel with a fine satin finish.

Blade precision graduated on four edges in 8ths, 16ths, 32nds and 64ths of an inch.

	Length Blade	Weight	Code
No. 361	6"	34 lb.	YIZYH
No. 362	9*	1 lb.	YOAGM
No. 363	12"	1 1/a lbs.	YOAHN

Packed one in a box

6.00



COMBINATION SOUARES



Hardened Steel Blades

hese are the same precision squares as shown on the preceding page but without protractor head or centerhead. The beams, equipped with a level and a scriber, have precision ground working faces with polished edges and ebony enameled webs. The blades are tempered, precision graduated and clearly etched.

Blade precision graduated on four edges in 8ths, 16ths, 32nds and 64ths of an inch.

	Length Blade	Weight	Code	Price each
No. 371	6*	3/s lb.	YOBJE	\$3.00
No. 372	9"	34 lb.	YOBLO	4.00
No. 373	12"	3/s lb.	YOBOL	4.60

Packed one in a box

BEVEL PROTRACTORS



Hardened Steel Blades

These protractors have a smooth action turret head precisely graduated from 0° to 90°, right and left, for a total of 180°. It can be set at any desired angle within this range. A small level is mounted on one side which makes it possible to determine angles to the horizontal and adds greatly to the setulness of the tool. They are provided with satin finish, precision graduated and etched blades to which they can be locked at any point.

No. 180 Protractor Head only fits the blades on the foregoing squares.

The hardened blades are graduated on four edges in 8ths, 16ths, 32nds and 64ths of an inch.

No.	Length Blade	Weight	Code	Frice each
No. 180	Protractor Head Only	1/4 lb.	YEJEG	\$4.00
No. 181	9 complete	1/a lb.	YELJO	5.75
No. 180 No. 181 No. 182	12 " complete	1 lb.	YEJUK	6.40

Packed one in a box



SPRING CALIPERS AND DIVIDERS

The pages immediately following show a very fine line of outside and inside calipers and divident. They are designed to meet the most exacting requirements of skilled machinists and toolmakers.

The stock used is a fine grade of hard crucible steel. All edges are nicely rounded and the entire tool ground and polished to a beautiful finish.

The legs are nicely tapered and the shape of the points developed for maximum accuracy in calipering of every description and for transferring measurements to or from a micrometer or steel rule within very close limits. Inside caliper legs are shaped to permit their use in unusually small spaces. Divider points are nicely tapered and carefully hardened and tempered.

Precisely machined and hardened screws are used on all spring calipers and dividers. The net are of two types, "solid" and "quick," both of which are hardened. Solid nuts are of ordinary construction. The threaded portion of quick nuts is made in two parts which are spread apart by a small spring when the pressure of the leg is removed. This disengages the threads and the nut can then be slipped over the entire length of the screw or any portion of it very rapidly and without turning it. The instant the leg is allowed to press against the nut it engages the screw thread again and the final adjustment is made by turning the nut in the usual manner.

Side deflection in calipers or dividers destroys their value for precise work, and the greatest care is used to eliminate it from these spring calipers and dividers. Accurately machined and hardened steel spools or fulcrum studs with a good wide face are used and the bearings in the legs are carefully fitted to them. These are held in close contact by stiff, heat-treated steel springs, making a very rigid tool.

Spring dividers have a finely knurled handle riveted to the spring to facilitate the describing of arcs and circles.

SPRING DIVIDERS



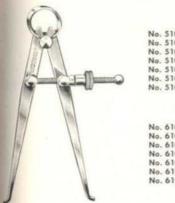
	Size	Weight Box	Code	Price etch
No. 500	3*	1/4 lb.	YUAJT	\$1.50
No. 500	4"	3/a lb.	YUASE	1.65
No. 500	5"	1/2 lb.	YUBAM	1.75
No. 500	6"	34 lb.	YUBIP	1.85
No. 500	8"	1 lb.	YUBNA	2.25
No. 500	10"	1 1/2 lbs.	YULYE	2.50
No. 500	12"	1 3/4 lbs.	YUMAY	2.70
	,	WITH QUICK NUT	r	
	Size	Weight Box	Code	Price and
No. 600	3 "	1/4 lb.	YUVNY	\$1.75
No. 600	4"	36 lb.	YUVUM	2.00
No. 600	5"	3/2 lb.	YUWAJ	2.10
No. 600	6"	34 lb.	YUWIL	2.20
No. 600	8 "	1 lb.	YUWYP	2.50
No. 600	10"	1 1/2 lbs.	ZAHZY	3.00
No. 600	12"	1 % lbs.	ZAIFS	3,50

WITH SOLID NUT

Packed three in a box



INSIDE SPRING CALIPERS



1.50 1.60 1.70 1.85
\$1.40 1.50 1.60 1.70
1.50 1.60 1.70
1.50 1.60 1.70
1.60
1.70
2.50
2.70
ce each
\$1.70
1.80
1.90
2.00
2.20
2.70
3.10

Packed three in a bax

OUTSIDE SPRING CALIPERS

	WITH SOLID NO	JT	
Size	Weight Box	Code	Price each
3 "	1/4 lb.	YOWEF	\$1.40
4"	3/a 1b.	YOWIG	1.50
5"	1/2 lb.	YOWOH	1.60
6"	3/4 lb.	YOWYK	1.70
8 "	1 3/s lbs.	YOYFA	1.85
10 "	1 3/4 lbs.	YUHET	2.50
12"	2 lbs.	YUHSA	2.70
	3" 4" 5" 6" 8"	Size Weight Box 3" 1/4 lb. 4" 3/4 lb. 5" 1/2 lb. 6" 3/4 lb. 8" 1 3/4 lbs. 10" 1 1/9 lbs.	3" ¼ lb. YOWEF 4" ¾ lb. YOWIG 5" ½ lb. YOWOH 6" ¼ lb. YOWYK 8" 1 ¼ lbs. YOYFA 10" 1 ¼ lbs. YUHET

	WITH	QUICK N	UT	
54	e W	eight Box	Code	Price each
3		1/4 lb.	YURAD	\$1.70
4	*	34 lb.	YURFE	1.80
5		1/2 lb.	YURIG	1.90
6		34 lb.	YURUJ	2.00
8	* 1	36 lbs.	YUSEG	2.20
10		% lbs.	ZADVY	2.70
12		lbs.	ZADYV	3.10

Packed three in a box



No. 620

No. 620 No. 620 No. 620 No. 620 No. 620 No. 620 No. 620



HERMAPHRODITE SPRING CALIPERS

Design and construction same as the outside and inside types. Legs nicely shaped and tapered. Divider leg hardened and nicely pointed. Hardened spools and screws. Powerful tempered springs. Finely polished finish.

		WITH SOLID NUT		
No. 530 No. 530 No. 530 No. 530	5/26 3" 4" 5" 6"	Weight Box 1/4 lb. 3/6 lb. 1/2 lb. 3/4 lb.	YUFER YUFTO YUFWY YUGAR	\$1.40 1.50 1.60 1.75
		WITH QUICK NUT		
	Size	Weight Box	Code	Price each
No. 630	3"	1/4 lb.	ZACRO	\$1.65
No. 630	4"	36 lb.	ZACTY	1.80
No. 630	5"	1/2 lb.	ZACUS	1.95
No. 630	6"	34 lb.	ZACYT	2.10





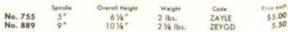
SURFACE GAUGES

These gauges embody all the most desirable features in a tool of this kind but still are very moderately priced. They are well built in every detail and nicely finished.

The heavy gray iron base, 3" by $2\frac{1}{2}$ " by $\frac{1}{2}$ ", is carefully ground for use on a surface plate and also grooved for use on cylindrical surfaces. All working faces are ground. Two frictional gauge pint located at the rear can be depressed to bear against the edge of surface plates, slots of planers and similar uses.

The spindle slides through a spring tensioned binder head with a knurled thumb screw control. This is pivoted on the base and provided with a screw for fine height adjustment. The spindle can be set of almost any angle or even turned down through the slot in the front of the base for use as a depth gauge or it can be dropped down through the binder head and the marker on its lower end used as a scratch gauge.

The scriber, six inches long, is carried in a head with spring control which holds it at any desired height on the spindle. It can be locked by merely tightening the knurled thumb screw. For work close to the surface plate the spindle can be removed and the scriber used in the main binder head.







THICKNESS GAUGES

gauges are used extensively in airplane and automobile maintenance and repair for such perations as setting spark gaps, distributor points and tappet clearances, determining piston and dearances, etc. Also very generally by toolmakers and machinists in jig and fixture, gauge and souging work, shimming and experimental uses.

The leaves are made of fine, tempered steel, individually tested to very close limits and well finished. sey are assembled in cases with heavy steel side plates and studs, held together by screws or rivets the case may be. Thicknesses are clearly etched on each leaf.





NO. 6 THICKNESS GAUGE - SIX 2 %6" LEAVES

insists of six leaves 2 1/4" long, 1/2" wide and .002, .003, .004, .006, .008 and .010 inch thick. e case is assembled with rivets. Weight Box

6.6

Length Leaves 2 %

Width

36 lb. Packed six in a box

WYGDE

Price soch \$0.50

NO. 9 THICKNESS GAUGE - NINE 3 1/4" LEAVES

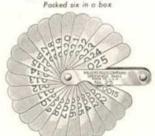
ansists of nine leaves 3 1/4" long by 1/2" wide and .0015, .002, .003, .004, .006, .008, .010, .013, and .020 inch thick. The case is assembled with rivets.

Length Leaves 3 1/4"

Wide

Weight Box 1/2 lb.

Code WYIFO Price each \$0.75



NO. 25 THICKNESS GAUGE - TWENTY-FIVE 2 1/4" LEAVES

Consists of twenty-five leaves 2 1/16" long by 1/2" wide and .0015, .002, .003, .004, .005, .006, .007, 008, .009, .010, .011, .012, .013, .014, .015, .016, .017, .018, .019, .020, .021, .022, .023, 024 and .025 inch thick. The case is assembled with rivets.

No. 25

Length Leaves 2 %

Weight Box

Code WYZCY Frice each \$1.60

Packed six in a box



THICKNESS GAUGES

These are the same precise, well-made gauges as described on the preceding page but with screw studs at the leaf end of the case to permit easy replacement of leaves or adjustment of the tension





NO. 19 THICKNESS GAUGE - NINE 3 1/16" LEAVES

Consists of nine leaves 3 1/4" long, 1/2" wide and .0015, .002, .003, .004, .006, .008, .010, .012 and .015 inch thick.

No. 19

Length Leaves 3 1/4"

1/2"

Weight Box of Six 1/2 lb.

Code WYROL Pride each \$1.60

NO. 22 THICKNESS GAUGE - TWENTY-TWO 2 1/6" LEAVES

Consists of twenty-two leaves 2 1/4" long, 1/2" wide and .004, .005, .006, .007, .008, .009, .010, .011, .012, .013, .014, .015, .016, .017, .018, .019, .020, .021, .022, .023, .024 and .025 indi thick.

No. 22

Length Legves 2 %

WLO

Weight Box of Six 1/4 lb.

Code WYVUT Price soft \$3.00

NO. 926 THICKNESS GAUGE - TWENTY-SIX 3 1/16" LEAVES

Consists of twenty-six leaves 3 1/16" long, 1/2" wide and .0015, .002, .0025, .003, .004, .005, .006, .007, .008, .009, .010, .011, .012, .013, .014, .015, .016, .017, .018, .019, .020, .021, .022, .023 .024 and .025 inch thick.

No. 926

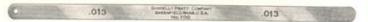
Length Leaves 31/4"

WERK 1/2"

Weight Box of Six 1 3/4 lbs.

Code WYWAR Dive and \$4.00

NO. 100 THICKNESS GAUGE STRIPS



These convenient strips are available in twenty-six different thicknesses. They are 12" long and 1/2" wide. Each strip is individually tested and held within very close tolerances. They are nicely finished and the thickness of each strip is clearly etched into the steel at two points. The ends are rounded and carefully finished for accuracy.

			Code:	WYUTO			
Thickness	Price each	Thickness	Price each	Thickness	Frice each	Thickness	Frice worth
.0015	\$0.40	.007	\$0.25	.013	\$0.25	.019	\$0.25
.002	.40	.008	.25	.014	.25	.020	.25
.0025	.40	.009	.25	.015	.25	.021	.25
.003	.40	.010	.25	.016	.25	.022	.25
.004	.30	.011	.25	.017	.25	.023	.25
.005	.30	.012	.25	.018	.25	.024	.25
.006	.30					.025	.25
	Av. I	4				1020	

Packed six in a substantial telescope box. Average weight per box 31/2 ounces



SCREW PITCH GAUGES

Designed for quickly and positively determining the pitch of screw threads. The teeth milled on the thin blades are the exact profile of a standard screw thread, each leaf being numbered with its own particular pitch. To determine the pitch of a screw try successive leaves of the gauge until the one is found which meshes perfectly with the thread. The pitch can then be read directly from the leaf.

The leaves are shaped so that they can be inserted into tapped holes for gauging internal threads as well as external. The leaves not in use can be folded into the handle.

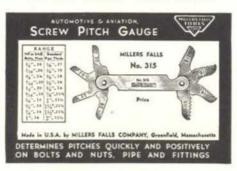


No. 135 has 22 pitches for V-threads, as follows: 9, 10, 11, 11½, 12, 13, 14, 15, 16, 18, 20, 22, 24, 26, 27, 28, 30, 32, 34, 36, 38 and 40. Length of leaves, 1 inch.

No. 436 has 30 pitches for V-threads, as follows: 4, 4 ½, 5, 5 ½, 6, 7, 8, 9, 10, 11, 11 ½, 12, 13, 14, 15, 16, 18, 20, 22, 24, 26, 27, 28, 30, 32, 34, 36, 38, 40, 42. Length of leaves, 1 ½ inches.

	No. Leaves	Length Leaves	Code	Price each
No. 135	22	1 *	YECUD	\$1.40
No. 436	30	156"	YOLVO	1.75
		Pocked one in a hox		

NO. 315 SCREW PITCH GAUGE



A popular priced gauge with eight leaves, covering all National Fine (NF) or SAE threads from ¼ inch-28 to 1 inch-14 and Standard Pipe threads from ½ inch-27 to 2 inches-11½. In other words, all the standard threads both NF or SAE and Pipe used in the automotive and aviation fields.

Each gauge mounted on a card printed in red and black as illustrated.

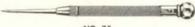
No. 315

No. Leaves B Weight Box 6 ozs. Code WIBAL \$0.50

Packed six in a box



SCRIBERS



NO. 75

The body of this tool is made of finely knurled steel tubing with a chuck which holds the finely drawn, tempered scriber point securely. The point can be removed and reversed for complete protection when not in use.

when nor in ose

No. 75

Blode 2 3/4" Overall 4 3/5" Weight Box 3 ozs. YAJRA

\$0.60

\$0.50

.55

.60

Packed six in a box

NO. 58

NOS. 61 and 62

Made of fine grade, round steel with beautifully tapered points carefully tempered, ground and polished. The central body is nicely knurled to give a sure grip. Points in Nos. 61 and 62 are replaceable.

No. 58 Single 4 ½" No. 61 Double 6 ½" No. 62 Double 9 ½"

6 Body 7 552" 8 14" 8 14"

Weight Box
4 02s.
5 02s.
6 02s.

YAHOC YAIGZ YAUA

Packed six in a box

NO. 440 SPEED INDICATOR



A very useful, easily operated indicator selling at a low price and having many sterling features.

The fixed dial is graduated both ways so that the speed of clockwise or counterclockwise shafts can be read directly. The rotating dial is quickly set to 0 by merely turning the knurled thumb screw to the left and tightening after the setting has been made.

The mechanism consists of a burnished worm cut on the steel spindle which drives the worm gear operating the recording dial. The spindle is hardened and the contact pressure is taken up on a ball thrust bearing. Two rubber tips are furnished, one for centered and one for plain or pointed shafts.

Complete instructions for setting and reading with each indicator.

Entire tool polished and nickel plated.

No. 440

Length 4 1/4 "

Weight 6 ozs. YOMOB

\$1.75

Packed one in a box

PARTS

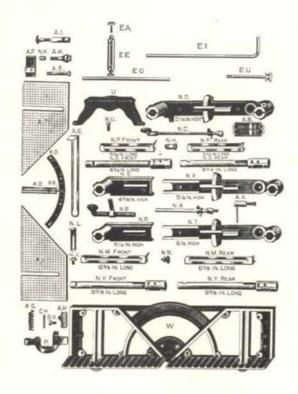






PARTS FOR LANGDON ACME MITRE BOXES

Nos. 68 to 75 and Nos. 71A to 75A





PARTS FOR LANGDON ACME MITRE BOXES

Nos. 68 to 75 and Nos. 71A to 75A

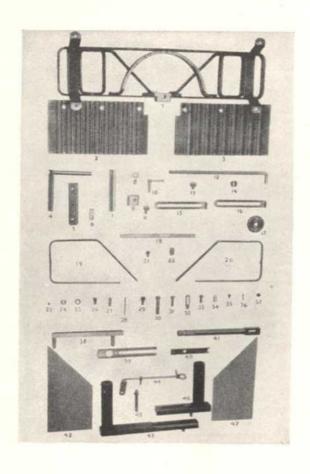
		For Bo	ixes Nos.		Price each
AA	Binder	71-75	71A-75A		\$0.15
AB	Index Plate	68-75	71A-75A		.25
AD	G/b	68-75	71A-75A		.50
AE	Gib Screw	68-75	71A-75A		.10
AF	Binding Strap	68-75	71A-75A		.20
AG	Spring	68-75			
AH	Stop Lever Strap	68-75	71A-75A		.10
Al	Stock Rest	68-75	71A-75A		.30
AK	King Bolt	68-75			
AS	Length Gauge	68-75			.30
14	Length Gauge, complete	*********	71A-75A		1.80
AT	Right Hand Bottom Board	68-75	71A-75A		.75
AV	Left Hand Bottom Board	68-75	71A-75A		.75
IH	Stop Lever Strap Screw	68-75	71A-75A		.10
CH	Stop Lever Pin	68-75	71A-75A		.10
EA	Length Gauge Link Screw (2)		71A-75A		.10
Œ	L.G. Link with Screws				
10	Length Gauge		71A-75A		.50
10	L.G. Guide Rod	PRESCRIPE			
NU.	L.G. Lock Screw	*******			
KA	Stop Lever Rod	71-75	71A-75A		.35
18	Thumb Lever	71-75	71A-75A	000000000000000000000000000000000000000	.50
HC	Thumb Stop Lever	68-70			.50
ND	Saw Guide (Front)	68-73	71A-73A		2.30
ND	Saw Guide (Rear)	68-73	71A-73A		2.30
H	Elevator	68-75	71A-75A		.50
NI I	Guide Stop Screw		71A-75A		.10
WK .	King Bolt Stop Screw	68-75	71A-75A		.10
M.	Guide Stop	68-75	71A-75A		.10
MM	Stop Gauge (Front and Rear)				
W.	Stop Gauge Thumb Screw	68-75	71A-75A		.20
NO	Swinging Lever				
NP.	Stop Gauge (Front and Rear)				
R	Sliding Front Post				
NT TH	Sliding Front Post				
NU	Swinging Lever				
VX	Leg Screw				
NY Y	Swinging Lever				
MA.	Saw Guide (Front)			************	
00	Saw Guide (Rear)		74A-75A		2.30
00	Indicator		71A-75A		.10
15	Stop Lever		71A-75A		.25
,3	Swinging Lever Bearing		71A-75A		.50
*	Leg		71A-75A	**************	.50
KO	Bed and Back		71A-75A		6.60
	Graduated Arc	68-75	71A-75A		.55

Parts NO, P. NR, NS, NT, U, W and NX have corresponding letters cast in them, so, if in doubt, reference may made to the castings.



PARTS FOR GOODELL-PRATT ALL STEEL MITRE BOXES

Nos. 1144, 1144A, 1264, 1264A, 1285, 1285A, 1305, 1305A, 1306 and 1306A Nos. 1002, 1003 and 1004





PARTS FOR GOODELL-PRATT ALL STEEL MITRE BOXES

Nos. 1144, 1144A, 1264, 1264A, 1285, 1285A, 1305, 1305A, 1305 and 1306A Nos. 1002, 1003 and 1004

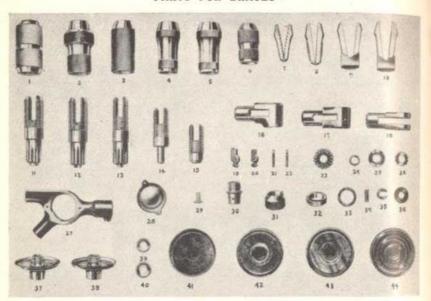
Name of Part
Bed (with legs)
Back—left hand
Back—right hand
Attochment Angle Slide
Attachment End Block
Attachment Block
stachment Length Gauge Slide
ttachment Washer
tfachment Clamp
Strehment Rinding Service
Attachment Binding Screw
stachment Knurled Screw
Attochment Length Gauge
Pepth Gauge Knurled Screw
Pepth Gauge Bent Washer
ront Depth Gauge
ack Depth Gauge
all Bearing, complete
cale and Escutcheon Pins
ight Hand Riser
tt Hand Riser
ack Screw (also Gib Screw)
uide Stop (Automatic Detent)
opper Plug
ut for R. and L. Binder Screw
iding Lever Binder Bolt Washer
oss Binder Screw (½ x ¾ °—18 Sq. Hd.)
atch Lever Pin
ottom Plate Pin
rver Screw (% x % '- 18 Fil. Hd.)
oss Screw
frachment Block Screw (4) (1 x 1/4 = 20 R. H.)
aw Stop (2)
iib Screw (¾ x ¼ '-20 R. H. Mch.)
atch Lever Spring
ow Stop Screw (2) (% "-10-32 R. H. Mch.)
ver Pin
all Cage, complete
ib (with Plugs and Brass Pin)
atch Lever—large part
and Lever—large part
ow Guide (give width of saw)
When Diete Left hand
oftom Plate—left hand
winging Lever, complete
ull Rod, complete
ond L Binding Screw
liding Lever, complete
oftom Plate-right hand
omplete Set End Attachments

1234567890

Vic de 54 mil 10



PARTS FOR BRACES



IMPORTANT: The number of the brace for which parts are wanted should be specified as well as the number of the part. If this information is not available make a sketch of the part showing dimensions.

No.		Frice each
1	Chuck Shell for Nos. 5010, 5012	\$2.00
2	Chuck Shell for Nos. 770, 771, 772, 7312	1.80
3	Chuck Shell for Nos. 502, 730, 731, 732, 733	1.00
4	Chuck Shell for Nos. 31, 32, 33, 1321, 1322, 1323, 1324	.70
5	Chuck Shell for Nos. 1708, 1710, 1712	.65
6	Chuck Shell for Nos. 142, 1410, 1610	.60
7	Jows for Nos. 142, 1410, 1610	,45
8	Jaws for Nos. 31, 32, 33, 1321, 1322, 1323, 1324, 1708, 1710, 1712	.65
9	Jaws for Nos. 502, 730, 731, 732, 733, 5010	.85
10	Jaws for Nos. 770, 771, 772, 7312	
11	Chuck Socket for Nos. 5010, 5012	,90
12	Chuck Socket for Nos. 730, 731, 732, 733, 770, 771, 772	1.00
13	Chuck Socket for Nos. 31, 32, 33, 1321, 1322, 1323, 1324	.60
14	Chuck Socket for Nos. 1410, 1610, 1708, 1710, 1712	.40
15	Churck Socket for No. 142	.15



PARTS FOR BRACES

		Price et
6	Crooked Socket for Nos. 31, 32, 33, 730, 731, 732, 733, 770, 771, 772, 1321, 1322, 1323, 1324	
7	Crooked Socket for Nos. 5010, 5012	1.5
	Crooked Socket for Nos. 1410, 1610, 1708, 1710, 1712	.1
		,
9	Ratchet Pawls for Nos. 31, 32, 33, 730, 731, 732, 733, 770, 771, 772, 1321, 1322, 1323, 1324, 5010, 5012	
0	Ratchet Pawls for Nos. 1410, 1610, 1708, 1710, 1712	
1	Ratchet Pawl Pins for Nos. 1410, 1610, 1708, 1710, 1712	
2	Ratchet Pawl Pins for Nos. 31, 32, 33, 730, 731, 732, 733, 770, 771, 772, 1321, 1322, 1323, 1324, 5010, 5012	
		Price e
3	Gears for No. 502 (2)	
4	Ratchet Chuck Socket Washer for Nos. 31, 32, 33, 730, 731, 732, 733, 770, 771, 772, 1321, 1322, 1323, 1324	
5	Ratchet Chuck Socket Washer for Nos. 5010, 5012	
6	Ratchef Gear for Nos. 1410, 1610, 1708, 1710, 1712	
7	Frame for No. 502	2
8	Cover for No. 502	
9	Ratchet Chuck Socket Screw for Nos. 31, 32, 33, 730, 731, 732, 733, 770, 771, 772, 1321, 1322, 1323, 1324, 5010, 5012	
0	Quill for Nos. 142, 1410, 1610	
1	Boxed Rotchet Ring for Nos. 31, 32, 33, 730, 731, 732, 733, 770, 771, 772, 1321, 1322, 1323, 1324, 1410, 1610, 1708, 1710, 1712, 5010, 5012	
2	Socket Ring Washer for Nos. 5010, 5012	
3	Socket Ring Washer for Nos. 31, 32, 33, 730, 731, 732, 733, 770, 771, 772, 1321, 1322, 1323, 1324	
4	Rotchet Powl Spring for Nos. 31, 32, 33, 730, 731, 732, 733, 770, 771, 772, 1321, 1322, 1323, 1324, 1410, 1610, 1708, 1710, 1712, 5010, 5012	
5	Quill Washer for Nos. 31, 32, 33, 502, 730, 731, 732, 733, 770, 771, 772, 1321, 1322, 1323, 1324, 1708, 1710, 1712, 5010, 5012	
6	Ball Bearing Washer for Nos. 1708, 1710, 1712	
7	Quill for Nos. 31, 32, 33, 502, 730, 731, 732, 733, 770, 771, 772, 1321, 1322, 1323, 1324, 5010, 5012	
8	Quill for Nos. 1708, 1710, 1712	
9	Ball Race for Nos. 1708, 1710, 1712	
0	Boll Race for Nos. 31, 32, 33, 730, 731, 732, 733, 770, 771, 772, 1321, 1322, 1323, 1324, 5010, 5012	
1	Head for Nos. 142, 1410, 1610	
2	Head for Nos. 1708, 1710, 1712	
13	Head for Nos. 31, 32, 33, 502, 730, 731, 732, 733, 770, 771, 772, 1321, 1322, 1323, 1324	
221	THE PARK THE	. 1

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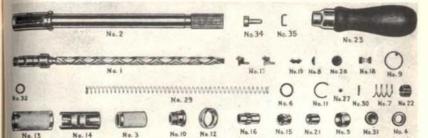


70.60 \$0.20 999 111111 AND GOODELL-PRATT 25 Cop to 125 Cop to 1 22222222222 100 Secoti Cheer 0.50 FALLS Arro shares 22222222222222 MILLERS Complete 1.550 2.500 2.500 2.500 3.0000 3. FOR PARTS # Side Hondle 0.00 2000 200 1.000 Noin Hendle 2.00 1.60 2.25 2.25 2.25 2.25 1.75 1.75 1.00 6A 12 19A 29A 97 1119A 1120B 120B 120B 477 646 646



PARTS FOR SPIRAL AUTOMATIC SCREW DRIVERS

Nos. 29, 61A, 62A, 67A, 610A, 620A, 670A



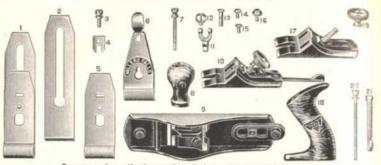
Please specify the number of the screw driver the parts wanted are to fit as well as the part number.

Fort Number	Part Name	29	61A	Screw 62A	Driver Numb	610A	620A	670A
1	Chuck and Spiral	\$0.40	\$0.60	\$0.70	\$0.55	\$0.60	\$0.70	\$0.55
2	Frame, complete	.35	1.00	1.50	.80	1.00	1.50	.80
3	Chuck Shell	.25	.15	.15	.15	.15	.15	.15
4	Chuck Collar	.10	.10	.10	.10	.10	.10	.10
5	Chuck Cam		.10	.10		.10	.10	
6	Chuck Washer		.10	.10		.10	.10	
7	Chuck Spring	.10	.10	.10	.10	.10	.10	.10
8	Blade Key	.10	.10	.10	.10	.10	.10	.10
9	Splined Washer		.10	.10	.10	.10	.10	.10
10	Frame Nut	.10	.25	.25	.25	.25	.25	.25
111	Spring Ring	0.000	.10	.10	.10	.10	.10	.10
12	Lock Cam		.50	.50	.30	.50	.50	.30
13	Shifter Sleeve	.20	20	.30	.15	.20	.30	.15
14	Cam		.15	.20	.10	.15	.20	.10
15	Ratchet Nut-right hand	.20	.30	.30	.25	.30	.30	.25
16	Ratchet Nut-left hand	.20	.35	.35	.30	.35	.35	.30
17	Pawls (2)	.10	.20	.20	.20	.20	.20	.20
18	Pawl Springs	.10	.10	.10	.10	.10	.10	.10
19	Ratchet Key		.10	.10	.10	.10	.10	.10
20	Lock Balls (2)	.10	.10	.10	.10	.10	.10	.10
21	Stop Collar	.10	.10	.10	-10	.10	.10	.10
22	Handle Plug Screw					.10	.10	.10
23	Handle and Ferrule	.20	.35	.40	.35	.35	.40	.35
24	Blade, Small				- See Po	ige 46 -	11000	
25	Blade, Medium	.15	_		- See Po	ge 46 -		
26	Blade, Large			110				
27	Headless Set Screw		.10	.10	.10	.10	.10	.10
28	Stop Washer					.10	.10	.10
29	Q.R. Spiral Spring	.10			100	.10	.10	.10
30	Stop Collar Pin		.10	.10	.10	.10	.10	.10
31	Handle Cap Screw	.15	44.4		534	.20	.20	.20
32	Chuck Rings (2)	.10			.10		2.2.0	.10
34	Step (Wood plug)	.10	44.4			***		600
35	Blade Key	.10	0.00			***		-7

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PARTS FOR BENCH PLANES



Be sure and specify the number of plane parts wanted are to fit.

152000												
Part No.		No. 8	No. 9	No. 10		No. 14	No. 15	No. 18	No. 22	No. 24		
740.	Description of Part	No. BC	No. 9C	No. 10C	No. 11	No. 14C			No. 22C	No. 24C	No. 814	No. 900
1	Double Iron	_				5	ee Page	4-				_
2	Single Iron	-				5	ee Page	4-				
3	Frog Adj. Screw	\$0.10	\$0.10	\$0.10	\$0.10	\$0.10	\$0.10	\$0.10	\$0.10	\$0.10	\$0.10	\$0.10
4	Frog Clip	.20	.20	.20	.20	.20	.20	.20	.20	.20	.15	.15
5	Plane Iron Cap	.45	.55	.60	.45	.55	.60	.60	.60	.60	.30	.30
6	Lever Cap Comp.	.85	.90	1.00	.85	.90	1.00	1.00	1.00	1.00	.60	.60
7	Knob Bolt and Nut	.10	.10	.10	.10	.10	.10	.10	.10	.10	.10	.10
8	Plane Knob	.40	.40	.40	.40	.40	.40	.40	.40	.40	.15	.15
9	Plane Bottom	3.20	3.20	3.80	3.80	3.80	3.80	5.30	7.50	9.00	1.75	1.45
10	Frog, complete	1.10	1.10	1.20	1.10	1.10	1.20	1.20	1.20	1.30	1.10	1.10
11	"Y" Adj. Lever	.10	.10	.10	.10	.10	.10	.10	.10	.10	.10	.10
12	Cop Screw	.10	.10	.10	.10	.10	.10	.10	.10	.10	.10	.10
13	Lever Cap Screw	.10	.10	.10	.10	.10	.10	.10	.10	.10	.10	10
14	Frog Clip Screw	.10	.10	.10	.10	.10	.10	.10	.10	.10	.10	.10
15	Handle Screw	307		.10	.10	.10	.10	.10	.10	.10	.10	10
16	Frog Screw	.10	.10	.10	.10	.10	.10	.10	.10	.10		.10
17	Frog	.70	.70	.80	.70	.70	.80	.80	.80		.10	.70
18	Plane Handle	.60	.60	.60	.60	.60	.60	.60		.90	.70	35
19	Adjusting Nut	.30	.30	.30	.30	.30	.30		.60	.60	.35	20
20	Handle Bolt and Nut.	.20	.20					.30	.30	.30	.20	
21	Lateral Adj. Lever			.20	.20	.20	.20	.20	.20	.20	.15	.15
41	Lateral Adj. Lever	.20	.20	.20	.20	.20	.20	.20	.20	.20	.20	.20

PARTS FOR NOS. 4 AND 85 RABBET PLANES

	TARTO TOR HOU. T AND OU RADDET TEAME	3	
No.	Name of Part	No. 4	
4304	Bottom		4
	Bottom, Top and Bottom, complete	\$0.80	*
4232	Plane Iron	.40	
1266	Lever.	.20	
2391	Lever Thumb Screw	.20	
2247	Lever Screw	.10	
4231	Adjusting Lever		
1235	Adjusting Lever Screw	+.*:	
1233	Rivet	5.775	
4234	Line Cutter (Sour)		
1265	Une Cutter (Spur)	* * *	
1221	Width Gauge Stee	* T036	
4219	Width Gauge Stop	+ 4	
264	Width Gauge Lock Screw	4.4.4	
1220	Depth Gauge	0.000	
1220	Depth Gauge Lock Screw	* * *	



PARTS FOR BLOCK PLANES



Be sure to specify the number of plane parts wanted are to fit.

Part	Description of Part	No. 16	No. 17	No. 36	No. 37	No. 56	No. 57	No. 206	No. 700
7	Adjusting Nut	\$0.20	\$0.20	\$0.20	\$0.20	\$0.20	\$0.20	\$0.20	\$0.20
2	Lever Cap	.50	.50	110000		.50	.50		
3	Finger Rest Knob	.20	.20	.20	.20	.20	.20	.20	.20
4	Lever Cop			1.10	1.10			1.00	
5	Adj. Lever Pin	12.00	.05	.05	.05	.05	.05	.05	.05
6	Adjusting Nut	.20	.20	.20	.20	.20	.20	.20	.20
7	Frog. complete					.20	.20		
2	Eccentric Plate		.20	.20	.20	.20	.20		
0	Lateral Adi, Lever	1000	.20	.20	.20	.20	.20		
10	Bottom	2.30	2.30	2.30	2.30	2.30	2.30	2.50	1.75
11	Lever Cap Screw	.10	.10	.10	.10	.10	.10	.10	.10
12	Single Plane Iron	.55	.55	.55	.55	.55	.55	.55	,55
13	Adjusting Lever	1000	.10	.10	.10	549.4	N 4-4	.10	(4)+(4)

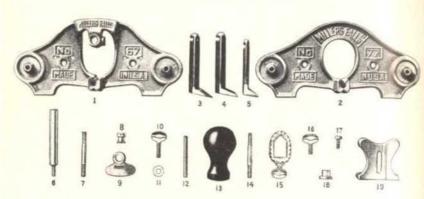


Be sure to specify the number of plane parts wanted are to fit.

Port	Description of Part	No. 5	No. 07	No. 33	No. 45	No. 55	No. 68	No. 75	No. 87	No. 97
1	Adjusting Nut		\$0.20		\$0.20			\$0.20		
2	Plane Knob		.20		.20		\$0.20	.20	\$0.20	\$0.20
3	Detachable Side		.50							
4	Frog. complete		.20		.20	\$0.30		.20		.30
5	Frog Pin.		.05		.05	.05		.05		.05
6	Side Screws (2)		.20							
7	Single Plane Iron		.70						1777	133
8	Single Plane Iron	\$0.30		\$0.20	.55	.40	.40	.55	.40	.55
9	Frog, complete		.25		.25			.25		77.0
10	Plane Bottom	.80	2.50	.60	1.25	.80	2.25	1.35	1.25	1.50
11	Lever Cop				.50			.50		
12	Lever Cop	00000	.40			100	735	2500	4.0	**
13	Lever Cap	.40	200	.20		.40	.40	* * *	.65	.40



PARTS FOR NOS. 67 AND 77 ROUTER PLANES



When ordering parts please be sure and give the number of the screw driver the parts are to fit as well as the part number.

Part No.	Description	No. 67	Ma
1	Plane Bottom.	1 10-1	. 100
2	Plane Bottom	\$2.03	\$2.
3	Cutter, ½" Pointed	.60	32
4	Cutter, ½*	.60	
5	Cutter, ¼*	.60	1
6	Attachment Stud		
7	Handle Stud	.15	
8	Handle Nut Throat Attachment	.15	
9	Throat Attachment	.15	
10			
11	Attachment Stud Tightening Screw	.10	
12	Fence Washer	.10	,
	Cutter Adjusting Screw	.20	
13	Knob Handle	.20	
14	Handle Stud	.15	-
15	Cutter Clamping Collar with Screw.	.50	-
16	Cutter Clamp Screw	.10	
17	Fence Screw Depth Adjusting Nut.	.10	
18	Depth Adjusting Nut	.15	
19	Fence	.25	



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NOS. 709 AND 714 PLANES



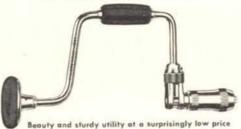
These entirely new planes enjoy an immense and growing popularity that can be attributed to their beauty and superior performance.

The Millers Falls patented three-point bearing of the lever cap locks the cutter iron to the frog so powerfully that vibration and chatter are eliminated. A much larger knurled adjusting nut permits fingertip control of depth adjustments of the cutting iron. Cutting iron is one solid piece of highest quality tool steel precision, heat treated to take and hold a keen honed edge. Cap is precision ground to fit the iron. New bed and frog design provide greater strength and the balance is excellent.

The new "Tenite" glossy red plastic main handle and knob are guaranteed unbreakable in use and provide a surer, more comfortable grip for even the largest hands. The nickel-plated and buffed lever cap and knurled adjusting nut add to the appearance, making it a tool to be proud

ot as we	en as a joy to o	Length	Cutter	Weight	Code	Frice
	Smooth Plane Jack Plane	9"	2* 2*	3% lbs. 4% lbs.	EMPOX EMFIT	9,50
			Packed one	in a box		

NO. 1950 RATCHET BRACE



Head and handle are solid glossy red "Tenite" — a velvet smooth plastic guaranteed unbreakable in use. All exposed metal parts are nickel-plated and buffed; and when combined with the red plastic handles comprise a tool of striking appearance and beauty.

Steel clad ball bearing head, smoothly curved 1/4 inch round steel sweep rod, rugged semiboxed, steel ring shift ratchet mechanism and Barber pattern chuck with forged steel jaws are construction features that insure its utility as well as its beauty.

Sweep 10" No. 1950 Packed two in a box

Weight 21/2 lbs.

AMMOT

Price Each \$4.80

Hew



NO. 333 UTILITY KNIFE





This knife cuts linoleum, fibre board, rubber, veneer, paper, fabrics, rope, composition roofing, gaskets, carpeting, matting, upholstery, wood, etc. It opens cartons. It trims. In business, in the home, and in the shop, its uses are unlimited.

The sturdy, sure-grip, die cast handle is nicely finished in grey enamel. It is equipped with five reversible blades which can be set in three positions. They are stored in the handle when not in use.

\$1.25 7.00

No. 333 No. 3318 No. 3325 Knife Complete with 5 Blades

Extra Blades (Regular) Pkg. of 5 \$0.50—Box of 100

Extra Blades (Heavy Duty) Pkg. of 5 \$0.60 — Box of 100 8.00

Six individually boxed No. 333 Knives packed in a Counter Display carton.
Weight of Display Carton with 6 Knives, 11/2 lbs.

NO. 710 HIGH SPEED COUNTERSINK



FAST-CUTTING

FIVE FLUTES 82 ANGLE

Made of a fine grade of high-speed steel for use in any material ordinarily machinable with a high-speed cutter. Has five, carefully ground flutes for fast cutting at an 82° angle for wood and machine screws. Shank is ¼° in diameter for use in three-jawed chucks. Length overall, 2½ inches.

Mounted four on a counter display easel.

Diameter

Code

Price Each

No. 710

High Speed Countersink

1/2"

YODER

\$1.50

Packed one card of 4 in a box. Weight per box 51/2 ounces.

NO. 810 COUNTERSINKS



ROSE PATTERN WITH FIVE FLUTES

Length

82 ANGLE

Code

Cut fast and clean in soft steel, iron, non-ferrous metals, woods, and other similar materials to admit heads of standard 82° machine or wood screws. Made of a fine grade of tool steel with carefully hardened, tempered and ground flutes. Square bit brace shanks.

No. 810	1/2"	41/4"	YOGAL	\$9.60
No. 810	5/8"	41/4"	YOGIT	9.60
No. 810	3/4"	41/4"	YOGOB	9.60
140. 010	6.99	147 575		

Packed six of a size in a box. Average weight per box 3/4 pound.



PLASTIC HANDLED SCREW DRIVERS

PACKED SIX IN A BOX

A fine new line of popularly priced, plastic handled screw drivers with real merit. The blades are forged from a high-quality alloy steel, carefully hardened and tempered for toughness, cross ground and plated. The handles are made of an unbreakable opaque red thermo plastic — slow burning and shockproof.

NO. 651 SCREW DRIVERS - Standard Round Blade

-	_		
		MITTERS WITE	22.0
14	215	474-4	

	Blade Length	Bit	Diam, Shank	Wt. Box	Code	Price Doz.
No. 651	3"	7/32"	7/32"	3/4 lb.	ZUPAL	\$4.80
No. 651	4"	%2"	9/12"	11/4 lbs.	ZUPET	5.40
No. 651	6"	356"	3/16"	11/2 lbs.	ZUPIN	7.20
No. 651	8"	3/6"	3/a"	23/8 lbs.	ZUPOR	10.20

NO. 652 SCREW DRIVERS — Heavy Duty Square Blade

-	_			-
No.	1,70		MILLIES FALLS CO	0.0
			1111	9
	0	20		

	Blade Length	Bit	Shank	Wt. Box	Code	Price Doz.
No. 652	4"	9/22"	1/4" x 1/4"	11/a lbs.	ZURAG	\$6.00
No. 652	6"	3/8"	5/16" x 5/16"	13/4 lbs.	ZUREL	8.40
No. 652	8"	1/2"	3/8" × 3/8"	3 lbs.	ZURIK	10.80
No. 652	10"	1/2"	3/8" x 3/8"	31/2 lbs.	ZUROX	13.40

NO. 653 SCREW DRIVERS - Round Cabinet Blade

G. DE FALLETT

	Blade Length	Bit	Diam. Shank	Wt. Box	Code	Price Doz.
No. 653	3"	3/16"	3/16"	10 oz.	ZUSAM	\$4.40
No. 653	4"	3/16"	3/16"	11 oz.	ZUSEB	4.60
No. 653	6"	3/16"	3/16"	13 oz.	ZUSID	4.80
No. 653	8"	3/16"	3/16"	14 oz.	ZUSOR	5.40

NO. 656 SCREW DRIVERS - Slim Square Blade



	Blade Length	Bit	Shank	Wt. Box	Code	Price Doz.
No. 656	4"	1/22"	3/16" x 3/16"	11/8 lbs.	ZUTAX	\$6.00
No. 656	6"	7/22"	3/16" x 3/16"	13/a lbs.	ZUTEF	8.40
No. 656	8"	7/12"	3/16" x 3/16"	11/2 lbs.	ZUTIP	10.00
No. 656	10"	7/22"	3/16" x 3/16"	13/4 Ibs.	ZUTOS	11.60

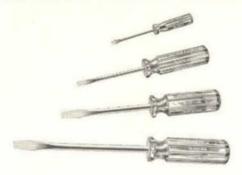
NO. 654 SCREW DRIVER - Stubby Type



	Blade Length	Bit	Shank	Wt. Box	Code	Price Doz.
No. 654	11/2"	%22"	1/4" x 1/4"	3/0 lbs.	ZUSUT	\$5.60



NO. 8504 SET OF SCREW DRIVERS



A carefully selected set of fine quality screw drivers for everyday use around the home and shop. They cover the entire range of screws found in appliances, radios, television sets, up to and including locks, door hinges, etc.

The set consists of 1 — No. 851-6"; 1 — No. 851-4"; 1 — No. 853-3"; and 1 — No. 855. These

drivers are fully listed on pages 40 and 41. The handles are made of shockproof red "Tenite" and are unbreakable.

No. 8504 Set

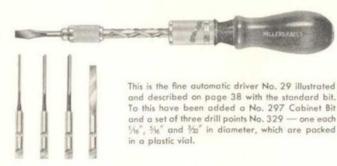
No. 29X Set

Weight 3/4 lb.

Code ZEOSY Price Set \$2.80

Packed one set in a box

NO. 29X AUTOMATIC SCREW DRIVER SET



Length extended with bit

101/4"

Weight 1/8 lb. Price each \$3.80

Packed one set in a box



NO. 525 ROTATABLE BLADE KEYHOLE SAW



Cuts most anything — most anywhere, taking all materials from soft wood to hard steel in its stride. Any of three types of 12 inch blades (10-tooth, all purpose; 24-tooth, thin metal cutting; or 7-tooth wood cutting) can be quickly interchanged in the handle. The saw may be purchased with any of these blades, or blades can be purchased separately.

The blade can be quickly rotated and positively locked in eight different positions allowing the operator to always have the handle in the clear for fast work. The solid cast handle and barrel, plus the machined steel blade holder and thumbscrew, provide a tool that can take the abuse characteristically given this type of saw. Overall length 151/4 inches.

	SAWS					EXTR	A BLADE	2		
	Type	Teeth Per Inch	WI.	Code	Price Each		Type Cutting	Teeth Per Inch	Code	Price Each
No. 425	Metal	24T	1 lb.	YEYGU	\$2.00	No. 10	Metal	101	YEYJA	\$0.50
No. 525	Metal	101	1 lb.	YEYHO	2.00	No. 24	Metal	24T	YEYKU	.50
No. 625	Wood	71	1 lb.	YEYHU	2.00	No. 27	Wood	71	YEYLO	.50

Packed one complete saw or 1/4 doz. blodes in box

NO. 725 NEST OF SAWS





Here is a combination of the fast-selling No. 525 Rotatable Blade Keyhole Saw with two extra interchangeable blades — one each of No. 24 and No. 27, giving a greatly increased range of usefulness and a tremendously greater sales potential.

Everyone — farmers, craftsmen and the home "handyman" — needs this saw. The compact and comfortable pistol grip handle, the dever feature which permits locking the blade in any of eight positions, together with the outstanding quality of the blades themselves, make it the outstanding buy-

Sales appeal has been added by mounting the combination on an attractive two-color card, which will do a fine selling job in windows, on counters or in bins. It's a year-round volume seller that will yield a big bonus as a Christmas, Father's Day or birthday gift.

No. 725 Nest of Saws (Carded)

Weight 15/4 lbs. Code YEYMA Frice Each

Packed four cards in a box For details of saw and blades see above

MILLERS FALLS

NO. 5256 KEYHOLE SAW DISPLAY UNIT



A substantial three color wood display. Saws easy to remove for handling and operating the rotatable blade feature. Furnished free with the following initial stock:

6 No. 525 Keyhole Saws	(1 \$2.00	\$12.00
3 Extra No. 10 Blades	(17, .50	1.50
Display Fixture	1986	Free
No 5256 Display Unit C	omplete	\$13.50

NO. 500 HACKSAW FRAME DISPLAY UNIT



A two color wood display of substantial construction. Saw frames easy to remove for checking their comfortable handles and pleasing balance, Furnished free with this initial stock of popular Millers Falls Frames:

2	No.	84	Hack	5aw	Frames	61	\$4.30	\$	8.60
2	No.	300	Hack	Sow	Fromes	(cr	3.80		7.60
2	No.	1027	Hack	Saw	Frames	(0)	2.20		4.40
N	n 51	oo Dis	nlov l	Juit C	omplete			5	20.60

WORKSHOP ACCESSORY DISPLAY UNIT



This display easily doubles or trebles the sale of these accessories. See pages 77 to 80 inclusive for complete line. Polished steel against a red background makes this an attention-getting display. Display unit furnished free with the following initial stack:

following	g initial stack:	
No. 962	1/2" Chuck with #1 MT	\$2.20
No. 940	Screw Face Plate #1 MT	1.60
No. 922	Spur Center #1 MT	1.10
No 934	88 Point Center #1 MT	3,20
No. 930	Point Center #1 MT	.80
No. 912	Cup Center #1 MT	1.10
No. 952	Work Arbor #1 MT	1.20
No. 938	Crotch Center	1.60
No. 917	Spur Center	1.00
No. 915	Cup Center	1.00
No. 984	Collet Chuck #33 J. Arbor	1.60
No. 978	Shaper Adapter #33 J. Arbor	1.60
No. 980	Shaper Adapter #33 J. Arbor	1.60
No. 960	Drill Pod #2 MT	1.60
No. 946	Work Arbor with Chuck	2.20
No. 982	Taper Adopter	2.60
No. 966	1/5" Drill Chuck	1.20
No. 926	Face Plate	2.00
No. 990		1.30
No. 956		1.20
No. 970	Chuck with Socket	1.90
No. 986	Wheel Arbor ¼" Shank	.75
No. 992	Disc Holder ¼" Shank	.70
No. 976	Shaper Callars	2.00
No. 994	Disc Holder — threaded socket	1.00
No. 944	MT Adapter Sleeve	1.50
No. 900	Display Unit Complete	\$39.55
Base	6 x 20 inches Height 211/2 Shipping Weight 16 pounds.	inches



NO. 2120 TWO SPEED BUFFING AND SANDING ATTACHMENT

Convert your electric drill to a portable buffer or sander, and eliminate the fatigue of hand polishing automobiles, furniture, metalware, etc., or slow hand sanding operations.

Millers Falls exclusive 100 degree angle drive insures drill and cord clearance when working on flat surfaces. The new two speed feature for low. rom drills and sanding operations is foolproof. No special adjustments - just drive from either spindle depending upon the speed desired. The two speeds are: (1) One-half drill rpm. (2) Double drill rpm.

The 5-inch pad is made of rubber and flexes readily to get the best results on irregular surfaces. A high-grade standard 5-inch lamb's wool bonnet and two 5-inch sanding discs are standard equip-



ment,				
		Weight Box	Code	Frice Each
No. 2120	Attachment Complete	21/4 lbs.	PABAP	\$8.45
	Extra Wool Bonnets	36 lbs.	PABEK	1.25
	Extra 0 or 00 Sanding Discs	1/2 lb.	PABIL	.10

Packed one complete unit, four bonnets, or two dozen sanding discs in a box



No. 4914 Drill Kit.

NO. 3914 ELECTRIC DRILL KIT

Three points of superiority make this your best drill kit buy. First: a finer, more powerful drill used as a power unit - no load speed 2500 rpm and available for 110 or 220 volt A.C. (specify voltage). See page 110 for complete drill specifications. Second: a wheel arbor that replaces the chuck, instead of fitting into it, keeping the load close to the bearings, insuring less wear and tear and truer running wheels with less vibration. Third: a horizontal stand that affords greater freedom of movement around the wheels.

PANVA

42.25

The following high quality accessories comprise this kit:

Josephs Geared Key

Any item may be ordered separately if desired

No. No.		Speed Drills 5.95	No. 23094 — 4" No. 23095 — 4"	Grinding Wheel Wire Brush Wheel Cotton Buff Wheel ameled Steel Case	1.10
		Ouck	Weight	Code	Price fully
Min	2014 Dall Kin	MATTER Colle	1.216 the	PANILIP	\$39.75

Packed one kit in a carton

121/2 lbs.



1/4" AND 1/2" UTILITY DRILLS



No. 914



No. 912

Electrically and mechanically these powerful streamlined drills are the last word in modern design—engineered to give you the finest law-priced drills available. Smooth running and sturdy, they are light in weight and beautifully balanced. Drill up to ¼ and ½ respectively in steel. Can also be used to power a wide variety of occessories for grinding, polishing, wire brushing, sawing, sanding, etc. Write for circular giving further details.

MOTORS: Universal for D.C. or A.C. - 25 to 60 Cycles - 115 and 220 230 volts.

HOUSING: Die cast aluminum alloy. Hammered grey enamel finish.

GEARS: Alloy steel - grease lubricated.

BEARINGS: Ball thrust spindle - all others oil impregnated bronze.

SWITCHES: Nos. 914-1914 single pole. No. 912 - double pole.

CORD: Seven feet rubber covered Type SJ with plag.

	Copacity	R.P.M.	Ang. Rating	Length	Wei	ight.	Price
No. 914	1/4"	2500	2:0	111/5"	31/2	lbs.	\$19.85
No. 1914	1/4"	2500	2.0	1155*	31/5		22.35
No. 912	1/2"	450	3.0	15"		lbs.	40.95
140. 912	(74		d with Josobs general b		8	lbs,	

NO. 2914 BENCH STAND

A solidly constructed stand that makes the No. 914 or No. 1914 Drill an efficient drill press. Drill is easily mounted and securely held for accurate work. Increases the usefulness of your drill many fold.



Maximum distance chuck to table	127
Maximum distance, chuck to column	436"
Maximum feed	11/5"
Weight	71/8 lbs.
No. 2914 Stand	\$13.00

NO. 2912 BENCH STAND

Ruggedly built to convert the No. 912 into a high-accuracy drill press. Heavy construction throughout. Large base gives stand great stability and is carefully machined for accurate work. Smooth acting with powerful leverage capable of exerting ample pressure for ½" drilling in steel. Takes only a few moments to mount or remove drill.

41 11 10 11 110	- Sec. 1981	
Maximum	distance, chuck	to.
table		1.4
Maximum	distance, chuck	to column
Maximum	feed	
Weight		

No. 2912 Stand



NO. 966 — 6" SANDER-POLISHER



A versatile finishing and multi-purpose power tool for which a wide variety of accessories are available. It's an ideal tool for the home or shop for buffing, disc sanding, orbital sanding, drilling, grinding, polishing, waxing, sharpening, mixing paints, cleaning, wire brushing.

High powered, light and easy to operate and ruggedly built, it is guaranteed to give you hundreds of hours of trouble-free performance.

The accessories available include an orbital sanding attachment for fine finishing, a Jacobs Chuck for drilling, a bench stand and arbor for operating, buffing, grinding and wire brush wheels, etc.

MOTOR: Universal for D.C. or A.C. - 25/60 cycles - 115 and 230 volts.

GEARS: PINION, and SPINDLE: Finest heat-treated alloy steel. Spindle has 1/4"-24 SAE thread. Spindle nut designed to take sanding discs with either 1/4" or 1/4" holes.

BEARINGS: Self-oiling, bronze sleeve bearings throughout.

BRUSHES: Long-life pigtail. Accessible from without.

SWITCH: Fully enclosed, bat-lever type. Underwriter approved.

CORD: Seven feet, best quality rubber covered. Type SJ. #18 Conductors with moulded-on strain relief reinforcement.

REGULAR EQUIPMENT: 6" Rubber Pad, 6" Lamb's Wool Bonnet, and three 6" Assorted Sanding Discs.

Disc R.P.M. Diameter No load Amps. Height Weight Code Price Each No. 966 6" 3300 3.8 73/4" 4 % lbs. PARID \$37.50

SEND FOR SPECIAL CIRCULAR FOR FULL DETAILS AND LIST OF ATTACHMENTS AND ACCESSORIES.